VOOK

DVR USER MANUAL

VDT2304SE
VDT2308SE
VDT2316SE

For H.264 4/8/16-channel digital video recorder

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CAUTION

- **Please read this user manual carefully to ensure that you can use the device correctly and safely**
- **We do not warrant all the content is correct. The contents of this manual are subject to change without notice**
- **This device should be operated only from the type of power source indicated on the marking label. The voltage of the power must be verified before using. Kindly remove the cables from the power source if the device is not to be used for a long period of time.**
- **Do not install this device near any heat sources such as radiators, heat registers, stoves or other device that produce heat**
- **Do not install this device near water. Clean only with a dry cloth**
- **Do not block any ventilation openings and ensure well ventilation around the machine**
- **Do not power off the DVR when the device is function. The correct procedure to shut down DVR is to stop recording firstly, and then use "shut down" button from the menu, and finally switching off the main power.**
- **This equipment is for indoor use only. Do not expose the machine in rain or moist environment. In case any solid or liquid get inside the machine's case, please cut off the power supply immediately, and get it checked by a qualified technician.**
- **Refer all servicing to qualified service personnel. No any parts repaired by yourself without technical aid or approval.**
- **This manual is suitable for 4/8/16-channel digital video recorders. All examples and pictures used in the manual are from 8-channel DVR.**

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1 Introduction

1.1 DVR Introduction

This model of DVR (Digital Video Recorder) is designed for high performance CCTV solutions. It adopts state of the art video processing chips and embedded Linux system. Meanwhile, it utilizes most advanced technologies, such as standard H.264 with low bit rate, Dual stream, SATA interface, VGA output mouse supported, IE browser supported with full remote control, mobile view(by phones), etc., ensuring powerful functions and high stability. Due to these distinctive characteristics, it is widely used in banks, telecommunication, transportation, factories, warehouse, and other related applications.

1.2 Main Features

COMPRESSION FORMAT

- Standard H.264 compression with low bit rate and better image quality

LIVE SURVEILLANCE

- Support HD VGA output
- Support channel security by hiding live display
- Display the local record state and basic information
- Support USB to make full control

RECORD MEDIA

- Support one SATA HDD to record for a longer time without any limitation

BACKUP

- Support USB 2.0 devices to backup

- Support saving recorded files with AVI standard format to a remote computer through internet

RECORD & PLAYBACK

- Record modes: Manual, Schedule, Motion detection and Sensor alarm recording
- Support recycle after HDD full
- Resolution, frame rate and picture quality are adjustable
- 128MB for every video file packaging
- 4 audio channels available
- Two record search mode: time search and event search
- Support 4/8/16 screen playback simultaneously
- Support deleting and locking the recorded files one by one
- Support remote playback in Network Client through LAN or internet

ALARM

- 1 channel alarm output and 4/8/16 channel alarm input available
- Support schedule for motion detection and sensor alarm
- Support pre-recording and post recording
- Support linked channels recording once motion or alarm triggered on certain channel
- Support linked PTZ preset ， auto cruise and track of the corresponding channel

PTZ CONTROL

- Support various PTZ protocols
- Support 128 PTZ presets and 8 auto cruise tracks
- Support remote PTZ control through internet

SECURITY

- Customize user right: log search, system setup, two way audio, file management, disk management, remote login,

live view, manual record, playback, PTZ control and remote live view

- Support 1 administrator and 63 users.
- Support event log recording and checking, events unlimited

NETWORK

- Support TCP/IP, DHCP, PPPoE, DDNS protocol
- Support IE browser to do remote view
- Support setup client connection amount
- Support dual stream. Network stream is adjustable independently to fit the network bandwidth and environment.
- Support picture snap and color adjustment in remote live
- Support remote time and event search, and channel playback with picture snap
- Support remote PTZ control with preset and auto cruise
- Support remote full menu setup, changing all the DVR parameters remotely
- Support mobile surveillance by smart phones , Symbian, WinCE, Iphone , Gphone, or Blackberry, 3G network available
- Support CMS to manage multi devices on internet

2 Hardware Installation

***Notice**: Check the unit and the accessories after getting the DVR.*
Please disconnect the power before being connected to other devices. Don't hot plug in/out

2.1 Install Hard Drive

2.1.1 Install Hard Drive

***Notice**: 1.This series support one SATA hard drive. Please use the hard drive the manufacturers recommend specially for security and safe field. Please refer to "Appendix C Compatible Devices 2".*
2. Please calculate HDD capacity according to the recording setting. Please refer to "Appendix B Calculate Recording Capacity".

Step1: Unscrew and Open the top cover
Step2: Connect the power and data cables. Place the HDD onto the bottom case as Fig 2.1.
Step3: Mount the HDD as Fig 2.2.

Note: For installation convenience, please connect the power and data cables first, and then wind the screws to fix the HDD.

Fig 2.1 Connect HDD

Fig 2.2 Screw HDD

2.2 Front Panel Instructions

***Notice**: The front panel descriptions are only for reference; please make the object as the standard.*

Item	Type	Name	Description
1	Work state indicator	Power	Power indicator, when connection , the light is blue
		HDD	When HDD is writing and reading , the light is blue
		Net	When access to network , the light is blue
		Backup	When backup files and data, the light is blue
		Play	When playing video, the light is blue
		REC	When recording, the light is blue
2	Compound button	MENU/+	1. Enter menu in live 2. Increase the value in setup
		BACKUP/-	1. Decrease the value in setup 2. Enter backup mode in live
		RECORD/FOCUS	1. Record manually 2. FOCUS function enables at PTZ mode.
		REW/SPEED	1. Rewind key 2. SPEED function enables at PTZ mode
		SEARCH/ZOOM	1. Enter search mode 2.ZOOM function enables at PTZ mode.
		PLAY /IRIS	1. Enter play interface 2. IRIS function enables at PTZ mode
		FF/ P.T.Z.	1. Fast forward 2. Enter PTZ mode in live
		STOP/ESC	1. Quit play mode 2. Exit the current interface or status
3		1-9	Input number 1-9 or choose camera

Item	Type	Name	Description
	Digital button	0/10+	Input number0, 10 and the above number together with other digital keys
4	Input button	Direction button	Change direction to select items
		Multi-screen	Change screen display mode like1/4/9/16 channel
		Enter button	Confirm selection
5	IR receiver	IR	For remote controller
6	USB	USB port	To connect external USB devices like USB flash, USB HDD for backup or update firmware; or connect to USB mouse
7	POWER	POWER	Shot switch off

2.3 Rear Panel Instructions

2.3.1 Rear Panel Interface

The rear Panel interface for 4-ch is shown as Fig 2.3:

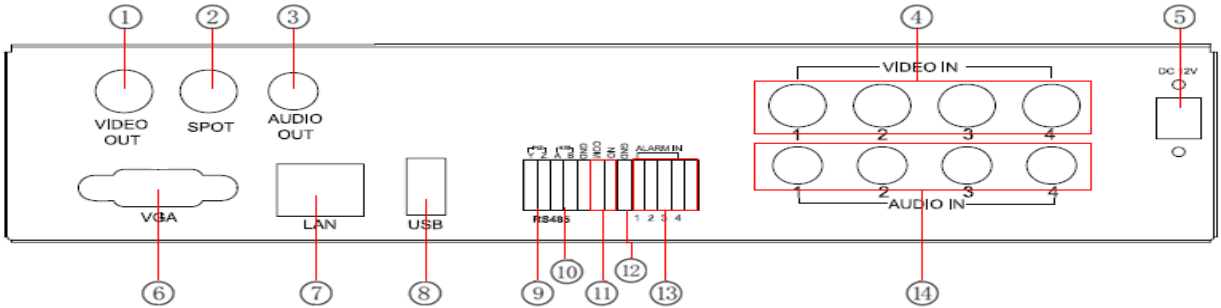


Fig 2.3 Rear Panel for 4-ch

Item	Name	Description
1	Video out	Connect to monitor
2	Spot out	Connect to monitor as an AUX output channel by channel. Only video display, no menu show
3	Audio out	Audio output, connect to the sound box
4	Video in	Video input channels from 1-4
5	DC12V	POWER INPUT
6	VGA port	VGA output, connect to monitor
7	LAN	Network port
8	USB port	Connect USB mouse or connect external USB devices
9	P/Z	Connect to speed dome
10	K/B	Connect to keyboard
11	ALARM OUT	1-ch relay output. Connect to external alarm
12	+ 5V and GND	+5 V and Grounding
13	ALARM IN	Connect to external sensor1-4
14	Audio in	4 CH Audio input

The rear Panel interface for 8-ch is shown as Fig 2.4:

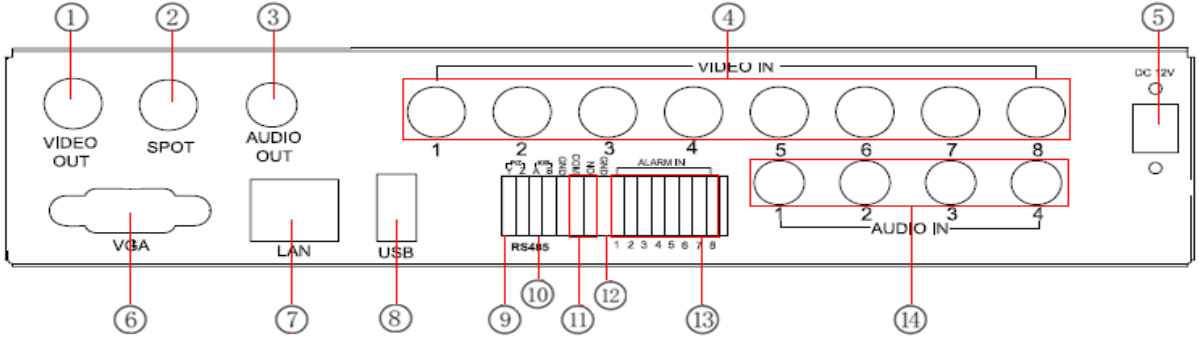


Fig 2.4 Rear Panel for 8-ch

Item	Name	Description
1	Video out	Connect to monitor
2	Spot out	Connect to monitor as an AUX output channel by channel. Only video display, no menu show
3	Audio out	Audio output, connect to the sound box
4	Video in	Video input channels from 1-8
5	DC12V	POWER INPUT
6	VGA port	VGA output, connect to monitor
7	LAN	Network port
8	USB port	Connect USB mouse or connect external USB devices
9	P/Z	Connect to speed dome
10	K/B	Connect to keyboard
11	ALARM OUT	1-ch relay output. Connect to external alarm
12	+ 5V and GND	+5 V and Grounding
13	ALARM IN	Connect to external sensor1-4
14	Audio in	4 CH Audio input

The rear Panel interface for 16-ch is shown as Fig 2.5:

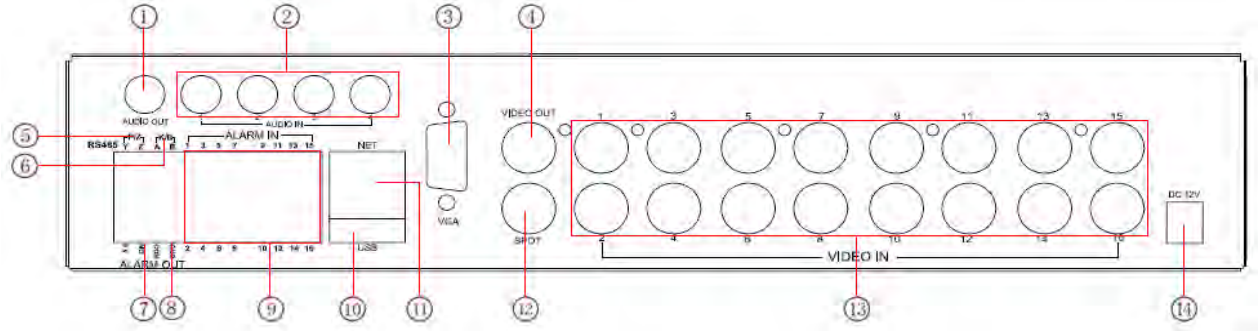


Fig 2.5 Rear Panel for 16-ch

Item	Name	Description
1	Audio out	Audio output, connect to the sound box
2	Audio in	4 CH Audio input
3	VGA port	VGA output, connect to monitor
4	Video out	Connect to monitor
5	P/Z	Connect to speed dome
6	K/B	Connect to keyboard
7	ALARM OUT	1-ch relay output. Connect to external alarm.
8	+ 5V and GND	+5 V and Grounding
9	ALARM IN	Connect to external sensor1-16
10	USB port	Connect USB mouse or connect external USB devices
11	NET	Network port
12	Spot out	Connect to monitor as an AUX output channel by channel. Only video display, no menu show
13	Video in	Video input channels from 1-16
14	DC12V	POWER INPUT

2.4 Remote Controller

It uses two AAA size batteries and works after loading batteries as following:
Step1: Open the battery cover of the Remote Controller
Step2: Place batteries. Please take care the poles (+ and -)
Step3: Replace the battery cover

***Notice**: Frequently defect checking as following*
1. Check batteries poles
2. Check the remaining charge in the batteries
3. Check IR controller sensor is mask
If it still doesn't work, Please change a new remote controller to try, or contact your dealers
The interface of remote controller is shown in Fig2.6 Remote Controller.

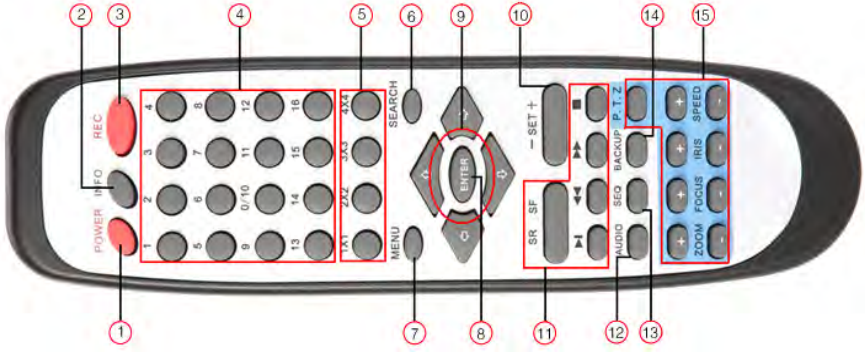


Fig 2.6 Remote Controller

Item	Name	Function
1	Power Button	Soft switch off to stop firmware running. Do it before power off.
2	INFOR Button	Get information about the DVR like firmware version, HDD information
3	REC Button	To record manually

Item	Name	Function
4	Digital Button	Input digital or choose camera
5	Multi Screen Button	To choose multi screen display mode
6	SEARCH Button	To enter search mode
7	MENU Button	To enter menu
8	ENTER Button	To confirm the choice or setup
9	Direction Button	Move cursor in setup or pan/title PTZ
10	+/- Button	To increase or decrease the value in setup
11	Playback Control Button	To control playback, Fast forward/rewind/stop/single frame play
12	AUDIO Button	To enable audio output in live mode
13	Auto Dwell Button	To enter auto dwell mode
14	BACKUP Button	To enter backup mode
15	PTZ Control Button	To control PTZ camera: Move camera/ZOOM/FOCUS/IRIS/SPEED control

Operation processes with remote controller to control multi-DVR

The device ID of the DVR is 0. When use of remote controller to control single DVR, it's not necessarily to reset the device ID, user can do operation directly; when control multiple DVR with remote controller, please refer to below steps:

Step1: Activate remote controller to control DVR: enable DVR: turn the IR sensor of the remote controller to the IR receiver that on the front panel, press the number key 8 twice, then input device ID (Range from: 0-65535; the default device ID is 0.) with other digital number: 0-9, after that, press ENTER button to confirm.

Step2: User can check the device ID by enter into System configuration→Basic configuration→device ID. User also can set other DVRs with the same device ID. For more convenient to operate, we don't recommend user to set the device ID too long.

Step3: Cancel controller to control DVR: turn the IR sensor of the remote controller to the IR receiver that on the front panel, press the number key 8 twice, then input the device ID that needs to be cancelled from controlling, press ENTER button to confirm. After that, the DVR will not be controlled by remote controller.

2.5 Control with Mouse

2.5.1 Connect Mouse

It supports USB mouse through the ports on the rear panel.

***Notice**: If mouse is not detected or doesn't work, check below steps:*

1. Make sure the mouse plugs in the USB mouse port not the USB port 2. Change a mouse to try

2.5.2 Use Mouse

In live:

Double-click left button on one camera to be full screen display. Double-click again to return to the previous screen display. Click right button to show the control bar at the bottom of the screen as Fig 2.6 Remote Controller. Here are all control and setup. Click right mouse again to hide the control bar.

In setup:

Click left button to enter. Click right button to cancel setup, or return to the previous.

If want to input the value, move cursor to the blank and click. An input window will appear as Fig2.7. It supports digitals, letters and symbols input.

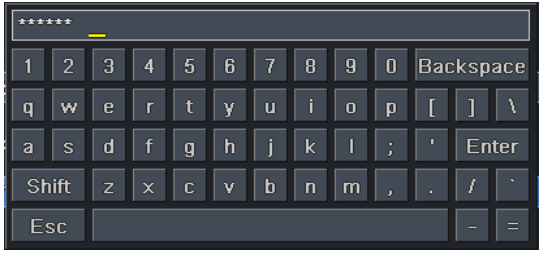


Fig 2.7 Digital Numbers and Letters Input Window

Users can change some value by the wheel, such as time. Move cursor onto the value, and roll the wheel when the value

blinks.

It supports mouse drag. I.e. Set motion detection area: click customized, hold left button and drag to set motion detection area. Set schedule: hold left button and drag to set schedule time

In playback:

Click left button to choose the options. Click right button to return to live mode.

In backup:

Click left button to choose the options. Click right button to return to previous picture.

In PTZ control:

Click left button to choose the buttons to control the PTZ. Click right button to return to live.

- ***Notice:*** ***Mouse is the default tool in all the operation below unless Exceptional indication***

3 Basic Function Instruction

3.1 Power On/Off

Before you power on the unit, please make sure all the connection is good.

3.1.1 Power on

Step1: connect with the source power; switch on the power button near the power port in the rear panel

Step2: the device will be loaded, and the power indicator will display blue

Step3: before start, a WIZZARD window will be pop-up and show some information about time zone, time setup, network configuration, record configuration and disk management. User can setup here and refer to the concrete setup steps from the corresponding chapters. If users don't want to setup Wizard, please click Exit button to exit.

After the device power on, if there is no menu or only has live image display, user can long press ESC button to switch.

- *Notice: this serial device can only display menu on VGA monitor or BNC monitor at one time, if there is live image display without menu display, please check up whether other device has menu display firstly, or long press ESC key to wait for login dialog box to appear. Long press ESC key can switch the output between BNC and VGA.*

3.1.2 Power off

User can power off the device by using remote controller、keyboard and mouse.

By remote controller:

Step1: press Power button, the Shut down window will appear, click OK, the unit will power off after a while.

Step2: disconnect the power

By keyboard and mouse:

Step1: enter into Menu, then select “System Shut Down” icon, the Shut down window will appear

Step2: click OK, the unit will power off after a while.

Step3: disconnect the power

3.2 Login

User can login and logout the DVR system. User cannot do any other operations except changing the multi-screen display once logout.

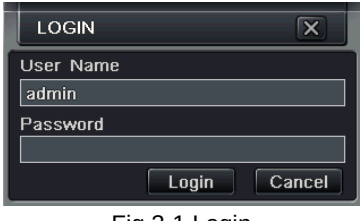


Fig 3-1 Login

- *Notice: the default user name and password is “admin” and 123456”*
- *The concrete operation steps for change password, add or delete user please refer to 4.7 User management*

configuration for more details.

3.3 Live preview

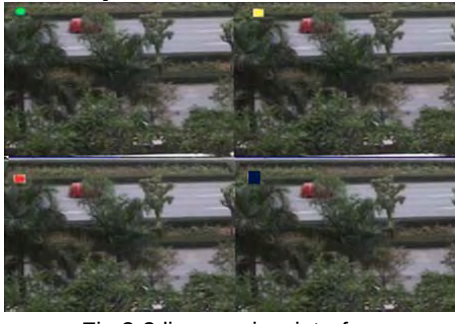


Fig 3-2 live preview interface

Symbol	Meaning
Green	Manual record
Yellow	Motion detection record
Red	Sensor Alarm record
Blue	Schedule record

3.3.1 Live playback

Click Play button to playback the record. Refer to Figure3-3. User can do concrete operation by click the buttons on screen.

Fig 3-3 live playback

4 Main menu setup guide

Click right mouse or press ESC button on the front panel, the control bar will display on the bottom of the screen, refer to Fig 4-1:

Fig 4-1 menu toolbar

Click the icon beside the screen display mode to display a channel select dialog. 6/8 channels can realize single channel big screen. Images can drag to any place to display in the live interface.

Dwell: Range of selecting to dwell is from single picture preview mode to 1/4/6/8 picture preview mode.

Color: Click this button; user can adjust the color of live pictures.

E-Zoom: Single channel large screen electronic amplification

Left click the channel which needs to amplify; Click the right mouse, select Zoom in button and then click the left mouse to amplify the image. Press left mouse to drug the cursor, user can view the image. Double-click the left mouse to exit. Click the right mouse to return to the main interface.

Volume: Enable sound.

PTZ: Click the PTZ button, user can control rotation position, speed of the dome and start track, auto scan or cruise in this interface. User can refer to PTZ configuration for more details.

Snap: click this button; user can snap the live pictures. These pictures will automatically be saved in the SATA disk.

Record: Click this button, user can start manual record.

Playback: Click this button, the device can playback the record files.

User can click button and drag it anywhere with the left mouse. Click Menu button, the interface will pop-up as Fig 4-2; press MENU button on the front panel or operate with remote controller also can display the main menu. Click Setup icon will pop-up the configuration menu:

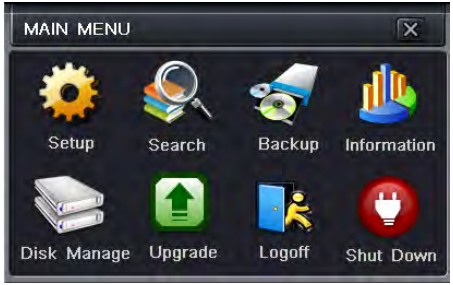


Fig 4-2 main menu

configuration menu

4.1 Basic configuration

Basic configuration includes three sub menus: system、date& time and DST.

4.1.1 System

Step1: enter into system configuration→basic configuration→system; refer to Fig 4-3:

Step2: in this interface user can setup the device name, device ID, video format, max online users, Video Output and language, Screensaver and so on. The definitions for every parameters display as below:

Device name: the name of the device. It may display on the client end or CMS that help user to recognize the device remotely.

Video format: two modes: PAL and NTSC. User can select the video format according to that of camera.

Password check: Enable this option. user needs to input user name and password can do corresponding operations with the relevant right in system configuration.

Show system time: display time in live.

Startup wizard: tick off this item, there will display an opening wizard with time zone and time setup information

Max online uses: set the max user amount of network connection

Video output: the resolution of live display interface, range from: VGA800*600, VGA1024*768,

VGA1280*1024 and CVBS.

Note： When switch between VGA and CVBS will change the menu output mode, please connect to relevant monitor.

Language: setup the menu language.

Note: after changed the language and video output, the device needs to login again.

Screensaver: user can setup the screensaver interval time (30s, 60s, 180s, 300s), if there is no any operation within the setting period, the device will auto logout and return to Login interface.

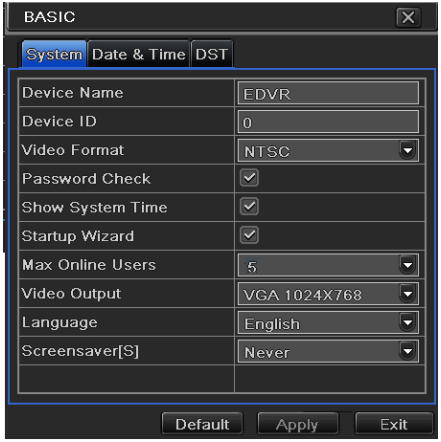


Fig 4-3 basic configuration-basic

4.1.2 Time & date

Step1: enter into system configuration→basic configuration→time & date; refer to Fig 4-4:

Step2: set the date format, time format, time zone in this interface; user also can adjust system date manually

Step3: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

Fig 4-4 basic configuration-time & date

4.1.3 DST

Step1: enter into system configuration→basic configuration→DST; refer to Fig 4-5:

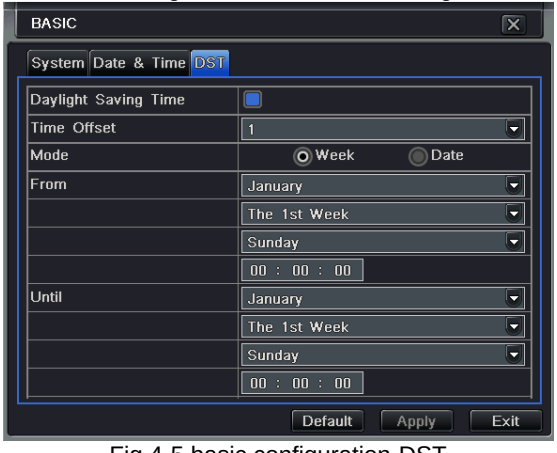


Fig 4-5 basic configuration-DST

Step2: in this interface, enable daylight saving time, time offset, mode, start & end month/week/date, etc.
Step3: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

4.2 Live configuration

Live configuration includes four submenus: live, main monitor, Spot and mask.

4.2.1 Live

In this interface, user can setup camera name, adjust colors: brightness, hue, saturation and contrast.

Step1: enter into system configuration→live configuration→live; refer to Fig 4-6:
Note: Click Camera Name to see a soft keyboard. User can self-define the camera name. Click Shift button to input Capital letters; click Shift button again to input Chinese characters.
Step2: tick off camera name and click “setting” button to display a window as Fig 4-7:

Fig 4-6 live configuration→live

Fig 4-7 live-color adjustment

Step3: in this interface, user can adjust brightness, hue, saturation and contrast in live; click “default” button to resort default setting, click “OK” button to save the setting.
Step4: user can setup all channels with same parameters, please tick off “all” and then do relevant setup.
Step5: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

4.2.2 Main monitor

Step1: enter into system configuration→live configuration→main monitor; refer to Fig 4-8:
Step2: select split mode: 1×1、2×2、2×3、3×3 and channel
Step3: dwell time: the time interval for a certain dwell picture display switching to next dwell picture display
Step4: selected the split mode, then setup current picture group. Click button to setup the previous channel groups

of dwell picture, click button to set the latter channel groups of dwell picture.

Step5: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

Fig 4-8 live configuration-host monitor

4.2.3 Spot

Step1: enter into system configuration→live configuration→Spot; refer to Fig 4-9:

Step2: select split mode: 1×1and channel

Step3: dwell time: the time interval for a certain dwell picture display switching to next dwell picture display

Step4: selected the split mode, then setup current picture group. Click button to setup the previous channel groups of dwell picture; click button to set the latter channel groups of dwell picture.

Step5: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface

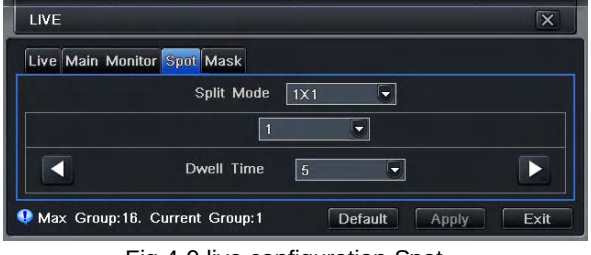


Fig 4-9 live configuration-Spot

4.2.4 Mask

User can setup private mask area on the live image picture, max threes areas.

Setup mask area: click Setting button, enter into live image to press left mouse and drag mouse to set mask area, refer to below picture. Click Apply button to save the setting.

Delete mask area: select a certain mask area, click left mouse to delete that mask area, click Apply button to save the setting.

Fig 4-10 live configuration-mask

Setup mask area

Live image mask area

4.3 Record configuration

Record configuration includes six sub menus: enable, record bit rate, time, recycle record, stamp and snap.

4.3.1 Enable

Step1: enter into system configuration→record configuration→enable; refer to Fig 4-11:

Fig 4-11 record configuration-enable

Parameter	Meaning
Record	Record switch of every channels
Audio	Enable live record audio

Step2: tick off record, audio and record time

Step3: user can setup all channels with same parameters, tick off “all”, then to do relevant setup.

Step4: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

4.3.2 Record stream

Step1: enter into system configuration→record configuration→record bit rate; refer to Fig 4-12:

Step2: setup rate, resolution, quality, encode and max bit stream

Step3: user can setup all channels with same parameters, tick off “All”, then to do relevant setup.

Step4: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

Note: if the rate value set is over high the maximum resources of the device, the value will be adjusted automatically.

Fig 4-12 record configuration-record bit rate

Parameter	Meaning
Resolution	Support CIF
fps	Range from 1-30（NTSC）1-25(PAL)
Quality	The higher the value is, the clearer the Recorded image is. Six options: lowest, lower, low, medium, higher and highest.

4.3.3 Time

Step1: enter into system configuration→record configuration→ time; refer to Fig 4-13:

Pre-alarm record time: the record time before event happen i.e. record time before motion detection or sensor alarm is triggered.

Post-alarm record: set the post recording time after the alarm is finished, five options: 10s, 15s, 20s, 30s, 60s, 120s, 180s and 300s.

Expire time: the hold time of saved records. If the set date is overdue, the record files will be deleted automatically.

Step2: user can setup all channels with same parameters. Tick off “all” to do relevant setup.

Step3: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

Fig 4-13 record configuration-time

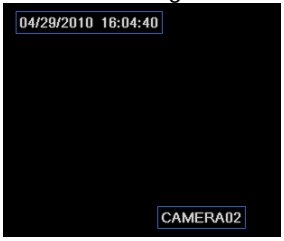
4.3.4 Stamp

Stamp：User can overlap the channel name and time stamp on video.

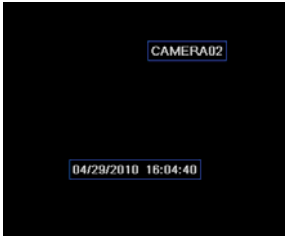
Step1: enter into system configuration→ record configuration→ stamp; refer to Fig 4-14:

Fig 4-14 record configuration-stamp

Step2: tick off camera name, time stamp; click Setting button, and then user can use cursor to drag the camera name and time stamp in random positions. Please refer to below Figures:



Before drag



after drag

Step3: user can also setup all channels with same parameters.

Step4: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

4.3.5 Recycle record

Step1: enter into system configuration→record configuration→recycle record;

Step2: tick off recycle record to enable the recycle record function. It will cover the earlier recorded files and keep recoding when HDD is full; if disenabled, it will stop recording when HDD is full.

Step3: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

4.3.6 Snap

In this interface, User can set up Resolution, quality, snap interval, snap number.

4.4 Schedule configuration

Schedule configuration includes three sub menus: schedule, motion and alarm.

4.4.1 Schedule

The volume means the seven days of a week from Monday to Sunday; the row means 24 hours of a day. Click the grid to do relevant setup. Blue means checked area, gray means unchecked area.

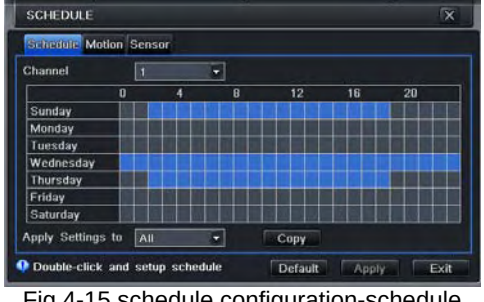


Fig 4-15 schedule configuration-schedule

Step2: select channel, double-click and a dialog box will pop-up as Fig 4-16, user can edit week schedule:

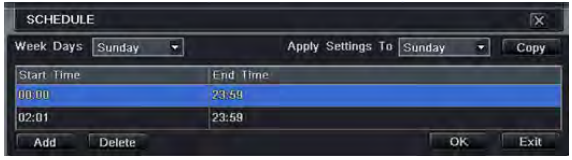


Fig 4-16 schedule-week schedule

① Click “add” button to add a certain day schedule; click “delete” button to delete the selected schedule;
Copy: user can copy the specify schedule to other dates.
Click “OK” button to save the setting, click “Exit” button to exit current interface.

② User can apply the schedule setting of certain channel to other or all channels. Just only select channel and click “Copy” button.

Step3: click “apply” button to save the setting.

4.4.2 Motion

Step1: enter into system configuration→schedule configuration→motion; refer to Fig 4-17:
Step2: the setup steps of motion are familiar with schedule; user can refer to 4.4.1 Schedule for details.

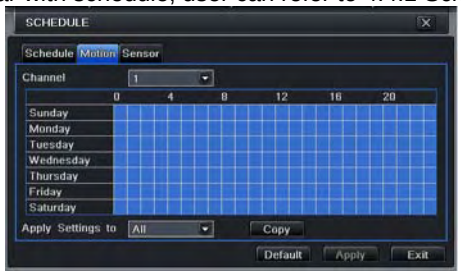


Fig 4-17 schedule configuration-motion

Note: the default schedule of motion detection is full-selected, that is, the color of schedule setting interface is blue.

4.4.3 Sensor

Step1: enter into system configuration→schedule configuration→alarm; refer to Fig 4-18:

Fig 4-18 schedule configuration-sensor

Step2: the setup steps of alarm are familiar with schedule; user can refer to 4.4.1 Schedule for details.

Note: the default schedule of sensor is full-selected, that is, the color of schedule setting interface is blue.

4.5 Alarm configuration

Alarm configuration includes five sub menus: sensor, motion, video loss, other alarm and alarm out.

4.5.1 Sensor

Sensor includes three sub menus: basic, alarm handling and schedule.

① Basic

Step1: enter into system configuration→alarm configuration→sensor→basic; refer to Fig 4-19:

Step2: enable sensor alarm and set the alarm type according to triggered alarm type. Two option: NO and NC.

Step3: user can setup all channels with same parameters, please tick off “all”, and then to do relevant setup.

Step4: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

Fig 4-19 alarm configuration-sensor-basic

② Alarm handling

Step1: enter into system configuration→alarm configuration→sensor→alarm handling; refer to Fig 4-20:

Step2: select hold time and click Trigger button. Then a dialog box will pop-up as Fig 4-21:

Fig 4-20 alarm configuration-sensor-alarm handling

Fig 4-21 alarm handling-trigger

Step3: After selecting Buzzer, there will be triggered buzzer alarm out;

Full screen alarm: when triggered alarm, there will pop up full screen alarm;
Email: tick of this function. When an alarm trigged, a notification email will be sent to user's designed email box including trigger events, time, snap pictures, device name, ID camera name etc.
Snap: Select channels. When an alarm is trigged, the system will automatically save the captured pictures from the selected channel. If user tick off Email function, these pictures will also be sent to user's designed email box.
To alarm out: When selecting the channel, there will be triggered alarm out in the designated channel. Click OK button to save the setting; click Exit button to exit the current interface.
To record: tick off recoding channels. It will record the camera when alarm triggered. Click OK button to save the setting; click Exit button to exit the current interface.
To P.T.Z: set linked preset and cruise for alarm. User can select any channel and multi channels as linked channels. Click OK button to save the setting; click Exit button to exit the current interface.
Step4: user can also setup all channels with same parameters.
Step5: click "default" button to resort default setting; click "apply" button to save the setting; click "exit" button to exit current interface.

③ Schedule

Step1: enter into system configuration→alarm configuration→sensor→schedule; refer to Fig 4-22:

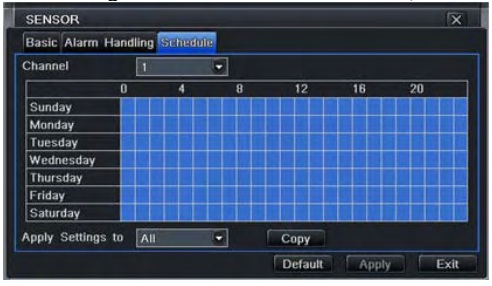


Fig 4-22 sensor-schedule

Step2: the setup steps of sensor schedule are familiar with schedule; user can refer to 4.4.1 Schedule for details.

Note: the default schedule of sensor is full-selected, that is, the color of schedule setting interface is blue.

4.5.2 Motion

Motion includes two sub menus: motion and schedule.

① Motion

Step1: enter into system configuration→alarm configuration→motion; refer to Fig 4-23:

Step2: enable motion alarm and set alarm hold time which means time interval between two adjacent detective motions. If there is other motion detected during the interval period which is considered continuous movement; otherwise, it will be considered that those two adjacent detective motions are two different motion events. Click Trigger button to pop up a dialog box.

Step3: the setup steps of motion trigger are familiar with alarm handling; user can refer to Chapter 4.5.1 Sensor →alarm handling for more details.

Step4: click Area button to pop-up a window as Fig 4-24:

Fig 4-24 motion-area

Step5: in the Area interface, user can drag slide bar to set the sensitivity value (1-8), the default value is 4. The higher the value is the higher sensitivity you get. Due to the sensitivity is influenced by color and time (day or night), user can adjust its value according to the practical conditions; click icon, set the whole area as detection area; click icon, the set detection area

will be cleared; click icon, user can test whether the sensitivity value and motion area are suitable accordingly（refer to following picture）; Click icon, to save the setting; click icon, exit current interface.

Note: when user drag mouse to set motion detection area, they have to click icon to clear all set detection area firstly, and then make the operation.

Step6: user can also setup all channels with same parameters.

Step7: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

② Schedule

Step1: enter into system configuration→alarm configuration→schedule; refer to Fig 4-25:

Step2: the setup steps of alarm schedule are familiar with schedule; user can refer to 4.4.1 Schedule for details.

4.5.3 Video loss

Step1: enter into system configuration→alarm configuration→video loss; refer to Fig 4-26:

Step2: the setup steps of video loss trigger are familiar with alarm handling; user can refer to Chapter 4.5.1 Sensor →alarm handling for more details.

Step3: user can also setup all channels with same parameters.

Step4: click “apply” button to save the setting; click “exit” button to exit current interface.

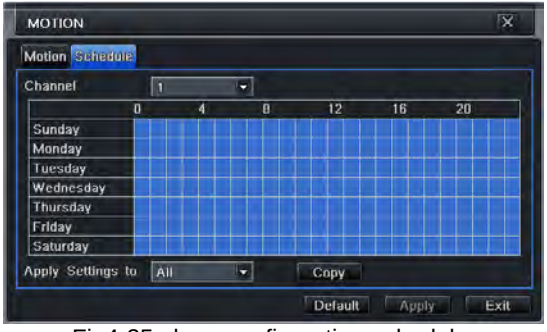


Fig4-25 alarm configuration-schedule

Fig 4-26 alarm configuration-video loss

4.5.4 Other alarm

Step1: enter into system configuration→other alarm; refer to Fig 4-27:

Disk full: user can choose the capacity of the disk storage and select the related alarm. If the disk is full, the system will alarm according to the setup.

IP conflict: if there is an IP address conflict within the same network, the device will alarm after user selects buzzer and the channel to alarm out.

Disconnect: if the disconnect happens, the device will the device will alarm after the user selects buzzer and the channel to alarm out.

Disk Warning: if the disk reduces, the system will send email to the designated mailbox or alarm to notify the reducing information after the user has selected the corresponding function.

Step2: the setup steps of Buzzer, Email, To Alarm Out are familiar with alarm handling. User can refer to Chapter 4.5.1 Sensor →alarm handling for more details.

Step 3: select a hard disk in the pull down list box. When the disk capacity is lower than that value, there will appear some text information on the lower right of the live image.

Step 4: click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

Fig4-27 other alarm

4.5.5 Alarm out

Alarm out includes three sub menus: alarm out, schedule and buzzer

① Alarm out

Step1: enter into system configuration→alarm out; refer to Fig 4-28:

Step2: in this interface, set relay alarm out name, select hold time which means the interval time between the two adjacent alarms.

Step3: user can setup all channels with same parameters. Tick off “all” to do relevant setup.

Step4: click “apply” button to save the setting; click “exit” button to exit current interface.

② Schedule

Step1: enter into system configuration→schedule;

Step2: the setup steps of alarm out schedule are familiar with schedule; user can refer to 4.4.1 Schedule for details.

Note: the default schedule of motion detection is full-selected, that is, the color of schedule setting interface is blue.

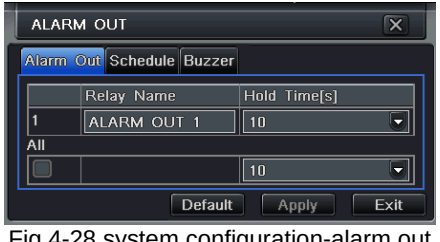


Fig 4-28 system configuration-alarm out

③ Buzzer

Step1: enter into system configuration→buzzer;

Step2: tick off Buzzer, set buzzer alarm hold time

4.6 Network configuration

Network configuration includes four submenus: network, sub stream, Email and other settings.

4.6.1 Network

Step1: enter into system configuration→network configuration→network; refer to Fig4-29:

Step2: HTTP port: the default value is 80. If the value changed, user needs to add the port number when typing IP address in IE address blank .i.e. set HTTP port to 82, IP address: http://192.168.0.25, user needs to input that address: http://192.168.0.25:82 into IE browser.

Server port: communication port

Step3: After selecting the "Obtain an IP address automatically", the device will distribute IP address, subnet mask, and gateway IP and DNS server.

Step4: enable PPPoE to directly connect the DVR to internet via ADSL and then input the user name and password; click TEST button to test the effectiveness of the relevant information.

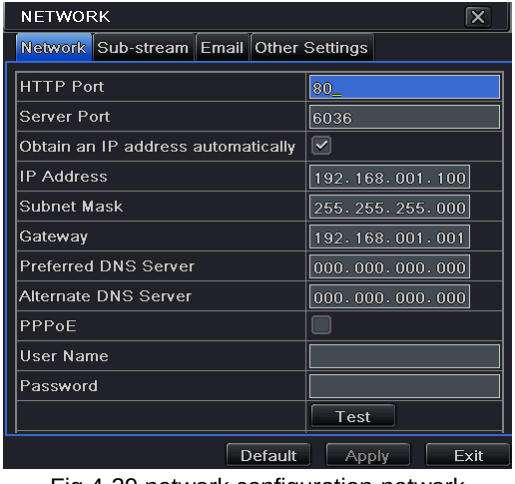


Fig 4-29 network configuration-network

4.6.2 Sub stream

Step1: enter into system configuration→network configuration→sub stream; refer to Fig 4-30:

Step2: select fps, resolution, quality.

Step3: user can also setup all channels with same parameters.

Step4: click “apply” button to save the setting; click “exit” button to exit current interface.

Fig 4-30 network configuration-sub stream

Parameter	Meaning
FPS	Range from: 1-25
Resolution	Support CIF
Quality	The higher the value is, the clearer the record image. Six options: lowest, lower, low, medium, higher and highest.

4.6.3 Email

Step1: enter into system configuration→network configuration→email; refer to Fig 4-31:

SMTP Server/Port: the name and port number of SMTP server. After selecting “This server requires a secure connection (SSL)”, user can setup mail servers (such as Gmail) according to actual needs.

Send address/password: sender’s email address/password

Send address/password: sender's email address/password
Receive address: receiver's email address. Here user can add at least three mail addresses.
Click TEST button to test the validity of the mailbox.
Attaching image: Tick off this item. The system will attach images when sending the emails.

Fig 4-31 network configuration-email

4.6.4 Other settings

Step1: enable DDNS server: user needs to input user name, password and host domain name of the registered website, click TEST to test the effectiveness of the relevant information.
Step2: click "default" button to resort default setting; click "apply" button to save the setting; click "exit" button to exit current interface.

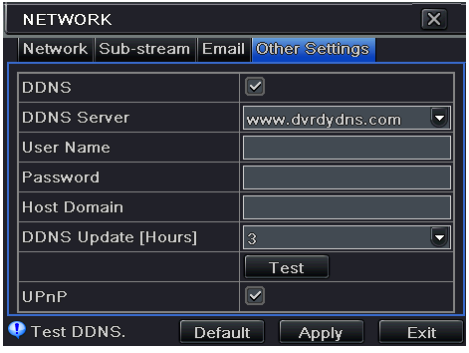
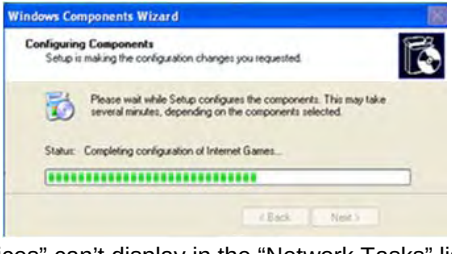


Fig 4-32 network configuration-other settings

Note: The domain name server that selected by user is a banding domain name of DVR. User should logon the website which provided by the server supplier to register a user name and password firstly, and then apply a domain name on line for the server. After the successful apply, user can access the server from the IE client by inputting that domain name.

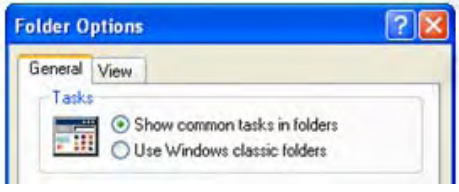
Enable UPnP: User may select UPnP and then enable UPnP function in the user's router. Then user can access DVR through WAN. When accessing the DVR through IE, user can check the IP address by the following method: Double-click the "My Network Places" icon on the desktop in PC, select "Show icons for networked UPnP devices" in the "Network Tasks" list box, a information window will pop up, click "YES" button, "Windows Components Wizard" dialog box will pop up as shown as below picture, press "Next" to continue. After finished the installation of configuring components, the UPnP icons will display. Users can double-click certain icon and check the IP address of the device.


Windows Components Wizard
Configuring Components
Setup is making the configuration changes you requested.
Please wait while Setup configures the components. This may take several minutes, depending on the components selected.
Status: Completing configuration of Internet Games...
< Back
Next >

If "Show icons for networked UPnP devices" can't display in the "Network Tasks" list box, please follow the below

operation:

- Click “Tools”-- “Folder options”
- Select the “Show common tasks in folders” in the “Tasks” check box to display the UPnP icon.

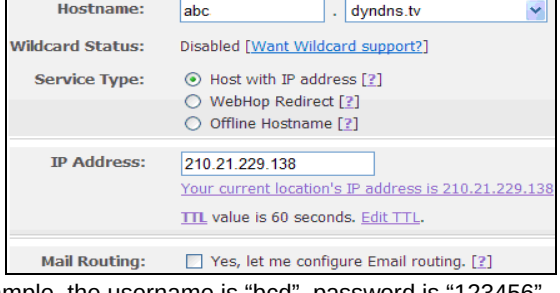


1. Domain name Registration （Take www.dyndns.com for example）

Note: Users can self-define the hostname, username and password.

Input www.dyndns.com in the IE address bar, user can access the domain name registration interface. Click”Dynamic DNS service”→”Create Free Hostname” to register. For example: Hostname is “abc.dyndns.tv.

After user fill in the blank, click “Add to cart”, Dynamic DNS Hosts dialog box will be displayed.



Then create user account. For example, the username is “bcd”, password is “123456”.

Click" Create Account" button to create user account.

2. DVR Setting

（1） Domain name

According to the domain name registration of "DDNS", the domain name for DVR is "www. abc.dyndns.tv"

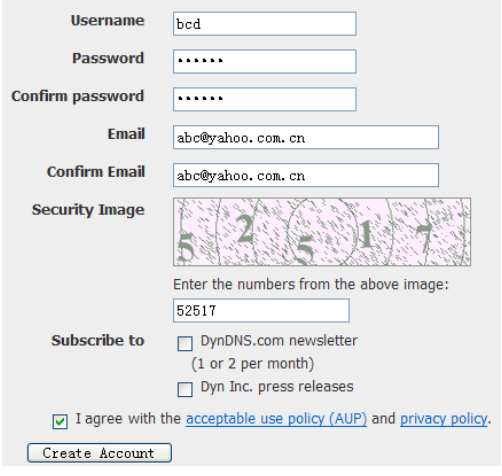
（2） Username and password

According to the above registration, username is "bcd". According to the above registration, password is "123456"

3. Application

Connect DVR to the Network Client.

① Enter into Basic configuration→Network→other settings, tick off DDNS, and select "Dyndns" at the DDNS Sever pull down list box and input user name and password.



② Enter into configuration interface of the router to map the server port and IP address (if the user enables UPnP function, he can skip this step). Click Save button to save the setting

③ Login IE browser and input registered domain name "http://www.abc.dyndns.tv", connect to DVR client.

Note

If the value changed, user needs to add the port number when typing IP address in IE address blank .i.e. set HTTP port to 82, IP address: http://192.168.0.25, user needs to input that address: http://192.168.0.25:82 into IE browser.

Definitions and descriptions of network configuration:

DDNS server	Website provided by dynamic domain name supplier. The optional: www.dns2p.net , www.meibu.com , www.dyndns.comandwww.no-ip.com
User name	User name for log in the website of domain name supplier
Password	Password for log in the website of domain name supplier
Host domain	The domain name user registered at the supplier's website.
Update interval	The interval time of upgrading DVR IP address

4.7 User management configuration

Step1: enter into system configuration→user management configuration; refer to Fig 4-33:

Step2: After clicking Add button, a dialog box will pop-up as Fig 4-34:

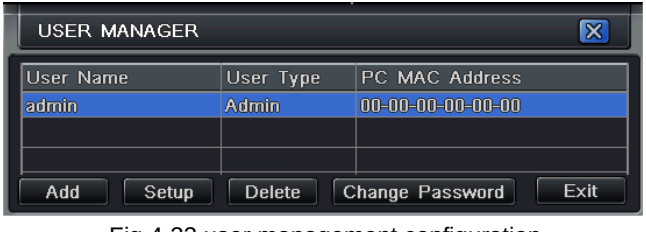


Fig 4-33 user management configuration

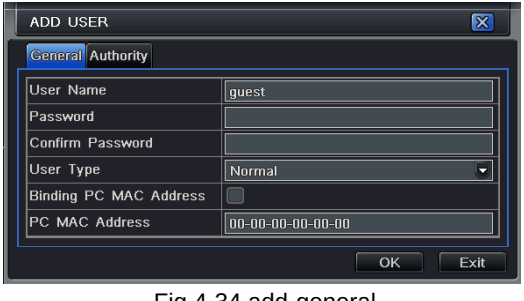


Fig 4-34 add-general

① General: Input user name, password; select user type: normal and advance, input the MAC address of the PC; click OK button, this user will be added into the user list box; click Exit button to exit the current interface.

Note: when the default value of binding PC MAC address is 0, the user is not bind with the specify computer; the, the user can log in DVR on the binding computer after set the specific binding MAC address.

② Authority:

Step1: enter into Add user→authority referring to Fig 4-35:

Step2: In the authority interface, assign the definite operation right for that user.

Step3: in the user management interface, click Setup button to modify user name, user type and binding PC MAC address.

Step4: select the user that user wants to delete in the user list box and then click Delete button to delete this user.

Step5: click Change password button to modify the password and then click Exit button to exit the current interface.

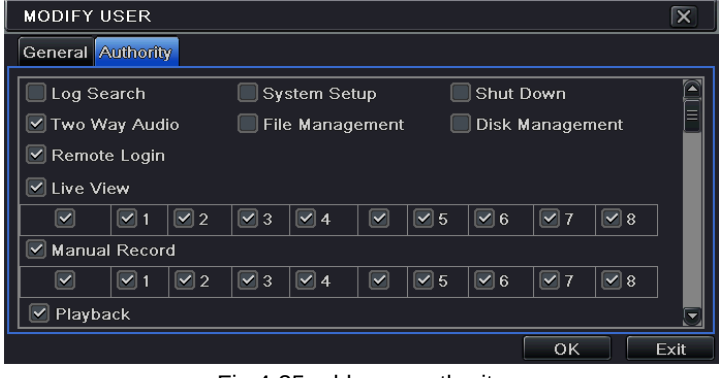


Fig 4-35 add user-authority

4.8 P.T.Z configuration

P.T.Z configuration includes two submenus: serial port and advance

① Serial port

Step1: enter into system configuration→P.T.Z configuration→serial port; refer to Fig 4-36:

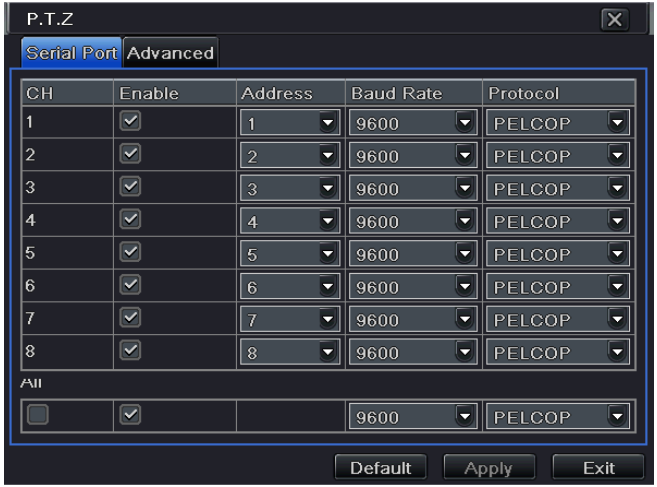


Fig 4-36 P.T.Z configuration-serial port

Definitions and descriptions of serial port:

Parameter	Meaning
Address	The address of the PTZ device
Baud rate	Baud rate of the PTZ device. Range form: 110, 300, 600, 1200, 2400, 4800, 9600, 19200, 34800, 57600, 115200, 230400, 460800, 921600.
Protocol	Communication protocol of the PTZ device. Range from: NULL, PELCOP, PELCOD, LILIN, MINKING, NEON, STAR, VIDO, DSCP, VISCA, SAMSUNG, RM110, HY, N-control.

② Advance

Step1: enter into system configuration→ P.T.Z configuration→advance; refer to Fig 4-37:

Step2: in the Advance interface, after clicking preset "Setting" button, a dialog box will pop-up as Fig 4-38:

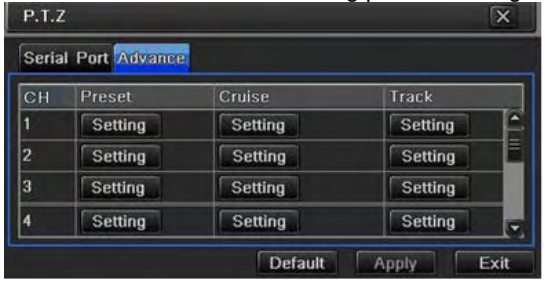


Fig 4-37 P.T.Z configuration-advance

Fig 4-38 advance-preset setting

a. in the preset set interface, click Setting button to see a window as Fig 3-39:

Fig 4-39 preset set-setting

b. user can control the dome rotates up, up left, down, right down, left , left down, right and up right and stop rotating; adjust the rotate speed and the value of zoom, focus and iris of the dome;

c. select the serial number of the preset point. Click button to enable the PTZ wiper and click button to enable the PTZ light.

Note: PTZ must support wiper and light, these two functional buttons can take effect. At the same time these two buttons are just available when selecting PELCOP or PELCOD.

Click Save button to save the settings; click icon to hide the tool bar, right-key can remerge it; click icon to exit the current interface.

d. in the preset interface, click OK button to save the setting; click Exit button to exit current interface.

Step3: in the Advance interface, click cruise “Setting” button, a dialog box will pop-up as Fig 4-40:

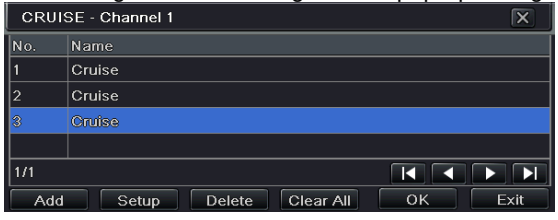


Fig 4-40 cruise set

a. click Add button to add cruise line in the list box (max 8 cruise line can be added); select a cruise line and click Setup button, to see a window as Fig 4-41:

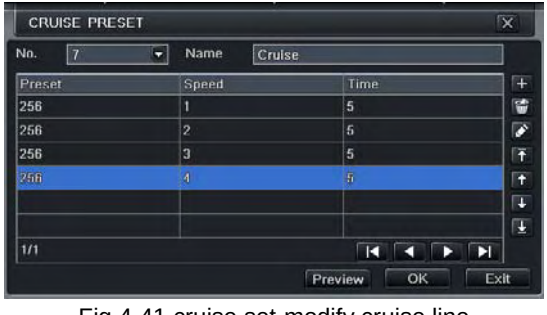


Fig 4-41 cruise set-modify cruise line

b. click Add icon to set the speed and time of preset point; select a preset point and click Delete icon to delete that

preset point; click Modify icon to modify the setting of a preset point. User can click those icons to adjust the position of preset point. Click Preview button to preview the cruise line and then click OK button to save the setting. Next, click Exit button to exit current interface.

c. select a preset point in the cruise line list box and click Delete button to delete that cruise line; click Clear all button to clear all cruise line from the list box; click OK button to save the setting; click Exit button to exit current interface.

Step4: in the Advance interface, click track “Setting” button to pop up a dialog box as Fig 4-42:

Fig 4-42 track setting

a. user can control the dome rotates up, up left, down, right down, left, left down, right and up right and stop rotating; adjust the rotate speed and the value of zoom, focus and iris of the dome; click Start Record button to record the move track of PTZ and click this button again can stop record; click Start track button to play recorded track and click this button again can stop play.

b. click icon to hide the tool bar, right-key can remerge it; click icon to exit the current interface.

Step5: in the Advance interface, click “default” button to resort default setting; click “apply” button to save the setting; click “exit” button to exit current interface.

4.9 Reset

Reset all settings and then the device will reboot.

5 Record search & playback and backup

Search configuration includes four submenus: Time Search, Event Search, File Management and Snap.

5.1 Time search

Step1: enter into Search configuration→Time Search; refer to Fig 5-1:

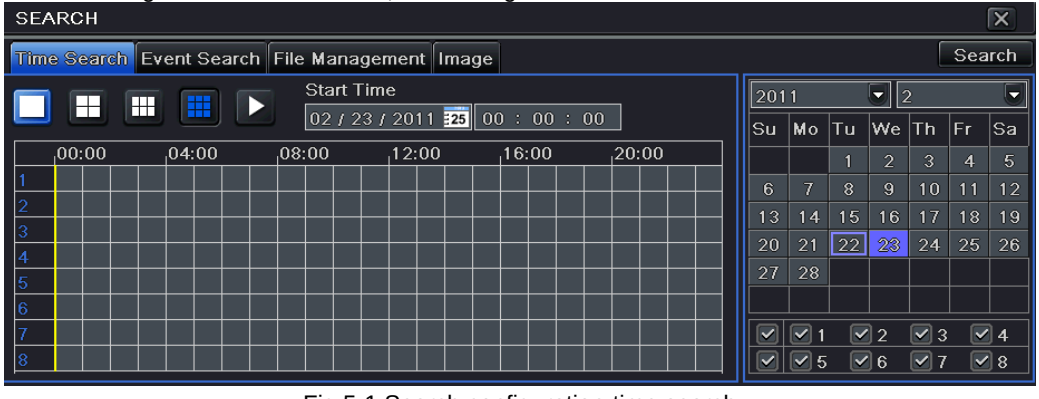


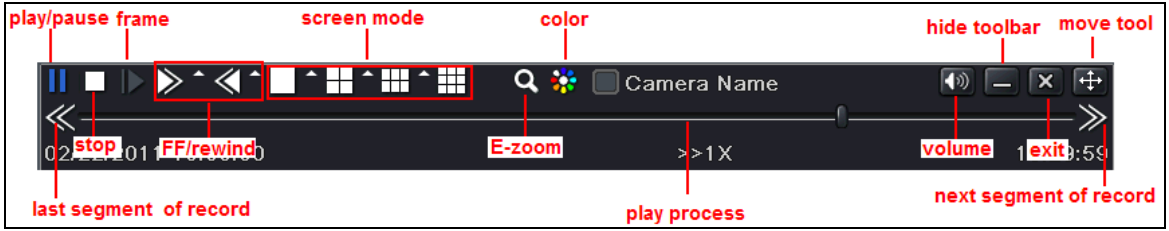
Fig 5-1 Search configuration-time search

Step2: select channel, screen display mode, the highlight date in the calendar means have record data

Step3: select a date and press Search button. Click the time grid to set the play start time or input play record time manually. The selected time match the blue grid.

Note: the vertical column means hours, horizontal column means channels.

Step4: click Play button to playback record; click the relevant buttons on the screen to do operation:



Playback buttons

Note: when the monitor resolution is VGA800*600, the time search interface will appear a hide button. Click this button to expand the whole interface.

5.2 Event search

Step1: enter into Search configuration→event search; refer to Fig 5-2:

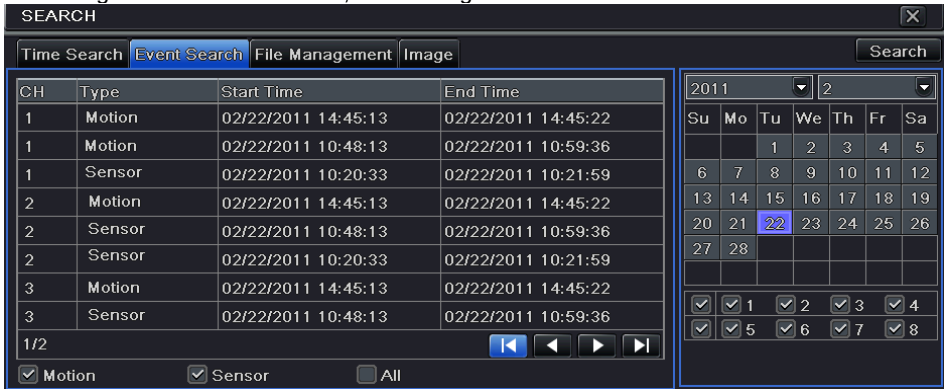


Fig 5-2 Search configuration-event search

Step2: After clicking Search button, the searched event information will displayed in the event list box. User can select date, channel. Tick off Motion, Sensor or All accordingly.
Step3: double check a certain record file to playback.

5.3 File management

Step1: enter into Search configuration→file management; refer to Fig 5-3:

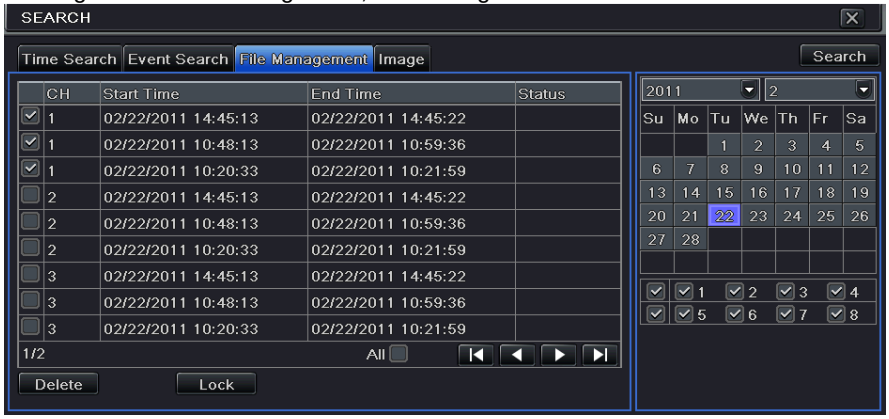


Fig 5-3 Search configuration-file management

Step2: When clicking Search button, the searched files will be displayed in the file list box; user can select date, channels accordingly.
Lock: select a file and click Lock button to lock this file, after that, that file will not be deleted or covered.
Unlock: select a locked file and click Lock button to unlock this file
Delete: select an unlocked file and click Delete button to delete this file.
Step3: tick off “All” button and then user can lock/unlock or delete all files in the file management column.

Step4: double click an unlocked item to playback.

5.4 Image

In this interface, user can set start, end time and channels to search the captured images and save, lock or delete these images. There are at most 2000 images which can be saved in the SATA disk. If there are more images saved in the SATA disks than 2000 images, those additional images will supersede prior images. Double click the image with the left mouse, it will automatically playback from the time of the image captured.

5.5 Backup

This unit supports backup by USB device, through the USB port on the front panel. User also can make backup by IE browser via internet. Refer to 7.3.2 Remote backup.

Step1: enter into backup configuration; refer to Fig 5-4:

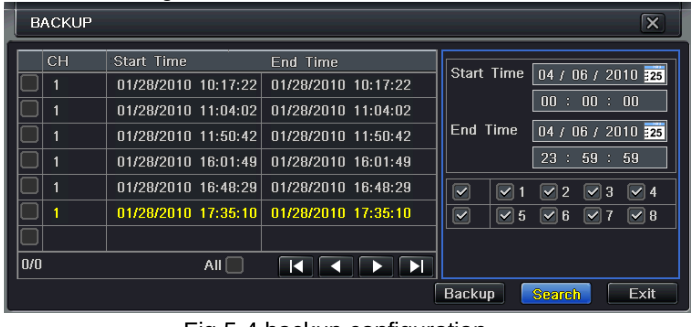


Fig 5-4 backup configuration

Step2: set the start & end time, select channels and click Search button to display the searched data in the data backup list box

Step3: checked a data file or tick off “All” to select all data files, click Backup button, Backup information dialog box will pop-up.

Step4: in the backup information interface, user can check the relevant information of backup files, storage type, save file type, etc. click Start button to starting backup.

6 Manage DVR

6.1 Check system information

Check system information includes five submenus: system, event, log, network and online user.

6.1.1 System information

In this interface, user can check the hardware version, MCU version, kernel version, device ID, etc.

6.1.2 Event information

In this interface, user can check record events according to set date.

6.1.3 Log information

In this interface, user can check relevant log information according to set date;

6.1.4 Network information

In this interface, user can check relevant parameters of network.

6.1.5 Online information

In this interface, user can check the details of the current connection of online users.

6.2 Disk management

1. **Format the disk**

Step1: enter into disk management interface

Note: please format the hard disk before record. If not being formatted, it will show the status of the disk-free space, and total space show OM at the bottom of screen.

Step2: click Refresh button to refresh the disk information of the list box; set the property of the disk then click Apply button to save the setting

Step3: select a hard disk and click Format button to star format.

Note: all recorded files in the hard disk will be lost after formatted.

2. **Advanced**

User may check model, S/N, firmware, health status of the disk in this interface. User also can monitor the temperature, internal circuit, dielectric material of the disk, analysis the potential problems of the disk and warn so as to protect its data.

6.3 Upgrade

At present, it only supports USB update. Get the software from your vendor when there is a new software version, and make sure it is corresponding with the DVR. User can check the USB information in Disk management.

Software Upgrade: user needs to copy the upgrade software which get from vendor into the USB storage device and then connect to the USB port. Enter Menu→Upgrade, the upgrade software name is displayed in the upgrade list box, select that software and click Upgrade button to start upgrading. Please wait for a while when the system is rebooted. Please don't cut off power during upgrading.

6.4 Logoff

Click Log off icon, a log off dialogue box will popup, click OK button, the device will log off. If user wants to log in again, click icon to enter into user name and password to re-login.

7 Remote Surveillance

7.1 IE Remote Surveillance

In order to view the DVR from a network it must be connected to a LAN/WAN or internet. The network setup should be done accordingly. Please refer to 4.6 Network Setup. This DVR supports IE browser, on Windows XP and Vista platform.

7.1.1 On LAN

Step 1: Enter into the DVR's Main Menu→Setup→Network interface to input IP address, Subnet Mask, etc .If using DHCP, please enable DHCP in both the DVR and the router.
Step 2: Enter Record Setup to set network video parameters like resolution, frame rate etc.
Step 3: Open IE on a computer on the same network. Input the IP address of the DVR in IE address bar and press enter.
Step 4: IE will download ActiveX component automatically. Enter the username and password in the subsequent window

***Notice**:* If HTTP port is not 80, other number instead, need add the port number after IP address. For example, set HTTP port as 82, need input IP address like 192.168.0.25:82.
User name and password here are the same with that used on the DVR. The default is admin and 123456.

7.1.2 On WAN

There are two ways for the DVR to connect to internet.
1. Connect the DVR to internet through router or virtual server
Step 1: Enter into the DVR's Main Menu→Setup→Network interface to input IP address, Subnet Mask, etc. If using DHCP, please enable DHCP in both the DVR and router.
Step 2: Forward IP address and port number in Virtual Server setup of the router or virtual server. Configure the firewall to allow accessing the DVR. (If the user has enabled the UPnP function in both the DVR and router, he can skip this step.)
Step 4: If users want to utilize dynamic domain name, please apply for a domain name in a DNS server supported by the DVR or router. Then add to the DVR or router.
This unit supports www.dns2p.com, www.meibu.com, www.dyndns.com, and www.no-ip.com.
Step 5: Open IE browser, input IP address, or dynamic domain name and enter. If HTTP port is not 80, add the port number after IP

address or domain name.

Step 6: IE will download ActiveX automatically. Then a window pops up and asks for user name and password. Input name and password correctly, and enter to view.

***Note**: If you cannot download and install ActiveX, please refer to Appendix A FAQ Q8.*

2. Connect the DVR to internet directly.

Step 1: Enter into the DVR's Main Menu→Setup→Network interface to enable PPPoE and then input user name and password received from your ISP. Next, click 'Apply'. The DVR will connect to the server and would give a confirmation message.

Step 2: When accessing the remote interface of DVR, user can input WAN IP to access directly (user can enter into Main menu→Information→Network interface to check IP address). The browser will download Active X control

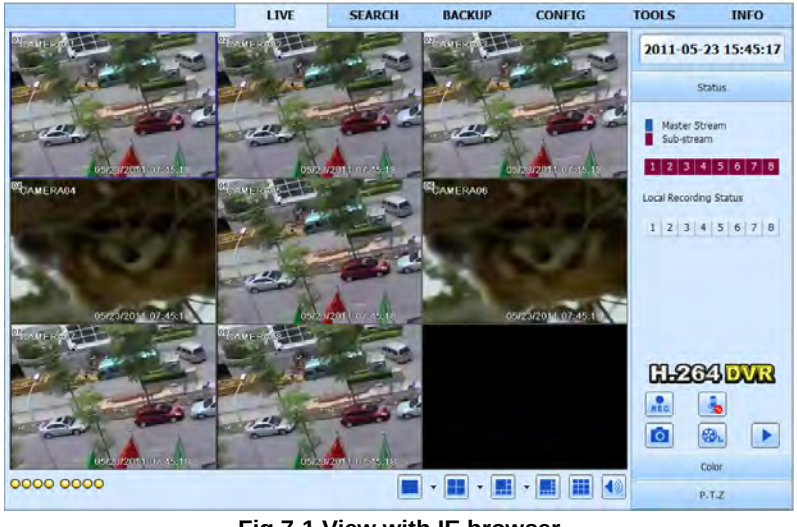
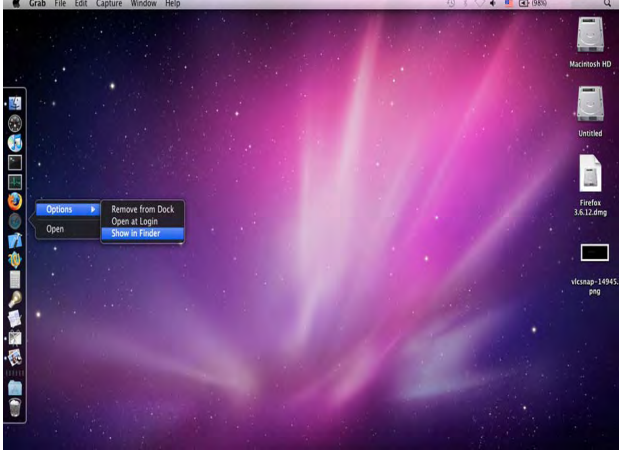


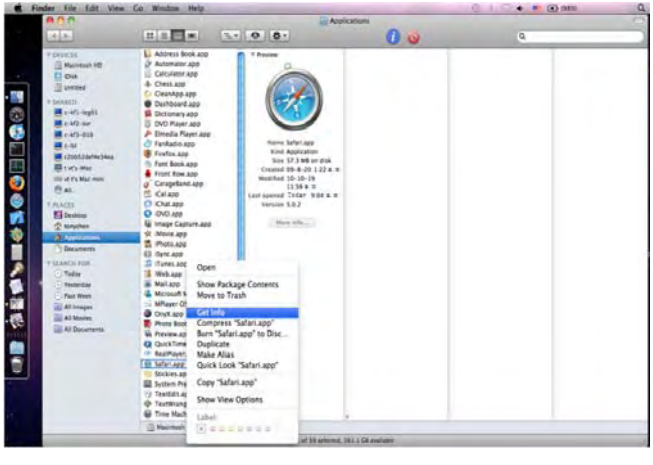
Fig 7-1 View with IE browser

7.2 Remote Surveillance through Apple PC

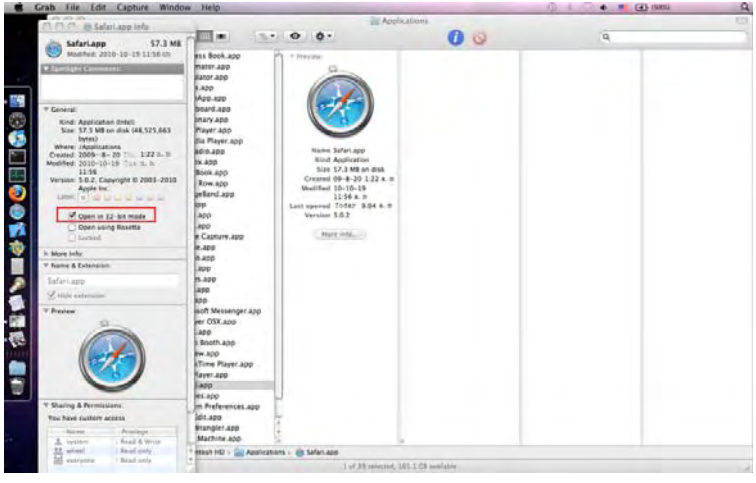
Note: Because the current plug-in version of client end just only supports 32-bit mode, so the safari browser shall start 32-bit mode. If the browser is the earlier MACOS version, the default setting is 32-bit mode and the setting can be skipped.
The Setting steps are as follows:

First: Right click safari icon and select “Show in Finder”.
Second: Select Applications→Right click “Safari. App”→Select “Get Info”.



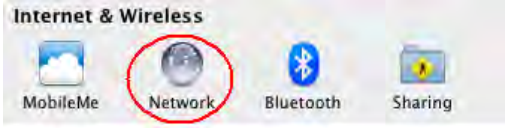


Third: Select “open in 32- bit mode”.

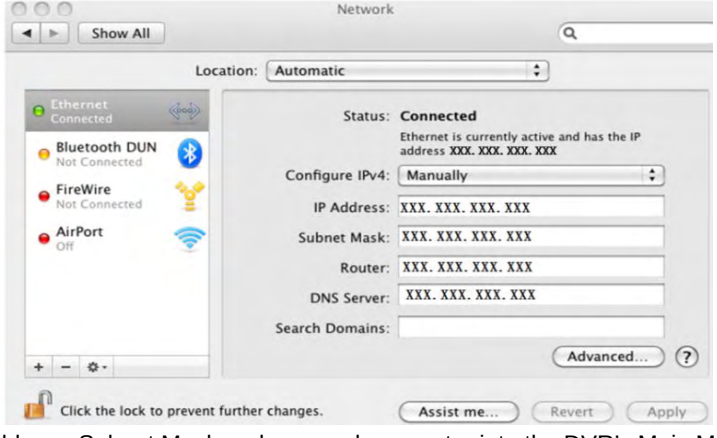


7.2.1 On LAN

Step 1: After starting Apple computer, click icon. The following window will pop up. Please select “System Preferences”→”Internet &Wireless”→click “Network”



Step 2: Enter into Network interface and then click “Ethernet Connected” to check the internet connection of Apple PC.



Step 3: After acquiring the IP address, Subnet Mask and so on, please enter into the DVR’s Main Menu→Setup→Network interface to manually input IP address, Subnet Mask and Gateway according to the configuration of PC. The network segment should be the same as the PC. If using DHCP, please enable DHCP in the DVR and router.

Step 4: After finishing the above information, users can enter LAN IP and http port in the Safari browser. For example: input

http://192.168.1.100:81(here 192.168.1.100 is LAN IP of DVR, 81 is the http port of DVR). Click " ↻ "button, the browser will download Active X control as shown below:

Step 5: Click icon and then select the Active X control, the welcome interface will be shown. Click "Continue"→"Install" button, the following window will pop up：

Input the name and password of Apple PC and then click "OK" to install this Active X control.

Step 6: After finishing installing the Active X control, please quit from the Safari browser. Right click icon on the desktop and then select "Quit" button to quit the browser. Then restart Safari browser. Input the IP address and http port to enter into the login interface of DVR.

7.2.2 On WAN

There are also two ways for DVR to connect to Internet.

1. Connect the DVR to internet through router or virtual server

Step 1: The network setups are the same as step one to step four of point 1 on WAN of IE remote surveillance.

Step 2: Enter WAN IP and http port in the Safari browser to install the Active control. The concrete steps are the same as step 5 and 6 of Chapter 7.2.1.

2. Connect the DVR to internet directly.

Step 1: The network setups are the same as step one of point 2 on WAN of IE remote surveillance.

Step 2: Enter WAN IP and http port in the Safari browser to install the Active control. The concrete steps are the same as step 5 and 6 of Chapter 7.2.1.

7.3 The remote live preview interface

Fig 7-2 Remote live preview interface

Symbol and function Definitions:

①	Channel indicator		Screen display mode		Volume
④	Snapping picture		Start manual record		Start IE record
⑦	Bidirectional talk		Playback		Color
⑩	PTZ control	⑪	Master/sub stream status		

Note: click **button to record manual and the record file will be saved in user's PC.**

Screen display mode:

Click the icon beside the screen display mode, channel select dialog will appear as below:

Take 8-channel DVR for example: user can tick off channels form 1-ch to 8-ch at random to display the live pictures, 6 channels can be selected at most. Then click OK button to confirm the setting.

Fig 7-3 Channel select dialog

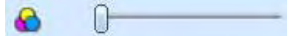
Snap pictures

Click "Snap" icon, the system will automatically capture pictures and save those pictures in the computer.

User should set up the save path for those picture in the Remote Preview interface→Configuration→Local configuration.

Color adjustment:

Drag the slide bar to adjust Brightness, Contrast, Hue, and Saturation. Click Default to reset them to original value.

Buttons	Description
	Drag the scroll bar to adjust the brightness of channel
	Drag the scroll bar to adjust the contrast of channel
	Drag the scroll bar to adjust the saturation of channel
	Drag the scroll bar to adjust the hue of channel
	Click this button to recover the default value of brightness, contrast, saturation and hue.
	Save the adjustment

PTZ control

Please connect speed dome to the device via RS485 firstly, make sure the protocol of the speed dome is supported by the device and set the relative parameters manually. User can control the dome up, down, right, left or stop rotating on Control

Center, adjust rotation speed, Iris and zoom, focus on the dome, and set the presets, etc.

Buttons definition:

Buttons	Description
	means the dome rotate up. means the dome rotate up left. means the dome rotate up right means the dome rotate down. means the dome rotate left down. means the dome rotate right down. means the dome rotate left. means the dome rotate right. means the dome stop rotating.
	Drag the scroll bar to adjust rotating speed of the dome.
	'Iris' button. Click button near 'Iris' button to increase light of the dome. Click button near 'Iris' button to decrease light of the dome.
	'Zoom' button. Click button near 'Zoom' button to zoom in the locale picture of this camera. Click button near 'Zoom' button to zoom out the locale picture of this camera.
	'Focus' button. Click button near 'Focus' button to have long focus. Click button near 'Focus' button to have short focus.
	Go to the Preset
	Select and do auto cruise
	Track
	Auto scan
	Wiper button
	Light button

Click the right mouse on the live interface, a pull-down menu will appear as below

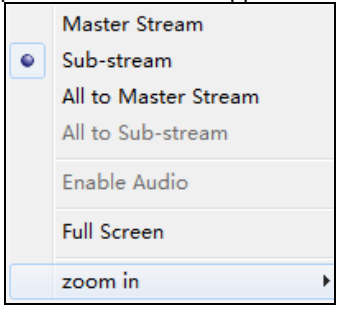


Fig 7-4 right key sub menu

Stream: this DVR supports master stream and sub stream. Master stream has higher frame rate, max 25FPS（PAL）/30 FPS（NTSC）for every channel, but it needs higher network bandwidth simultaneously; Sub-stream has low frame rate, max 6FPS （PAL）/7FPS（NTSC） for every channel, it requires low network bandwidth. Therefore, users can select the stream according to their bandwidth.

All to master/sub stream: set all channel to master stream or sub stream.

Enable audio: enable or disenable audio

Full screen: the live preview picture will display with full screen and the tool bar will be hided; double click left mouse or click right mouse to return

Zoom in: Single channel large screen electronic amplification

Left click the channel which needs to amplify; Click the right mouse, select Zoom in button and then click the left mouse to amplify the image. Press left mouse to drug the cursor, user can view the image. Double-click the left mouse to exit. Click the right mouse to return to the main interface.

7.4 Remote playback & backup

7.4.1 Remote playback

Click button to enter into record playback interface, refer to Fig 7-5:

Select the record date and channels; double-click the file name in the record file list box, user can play that file and preview the picture.

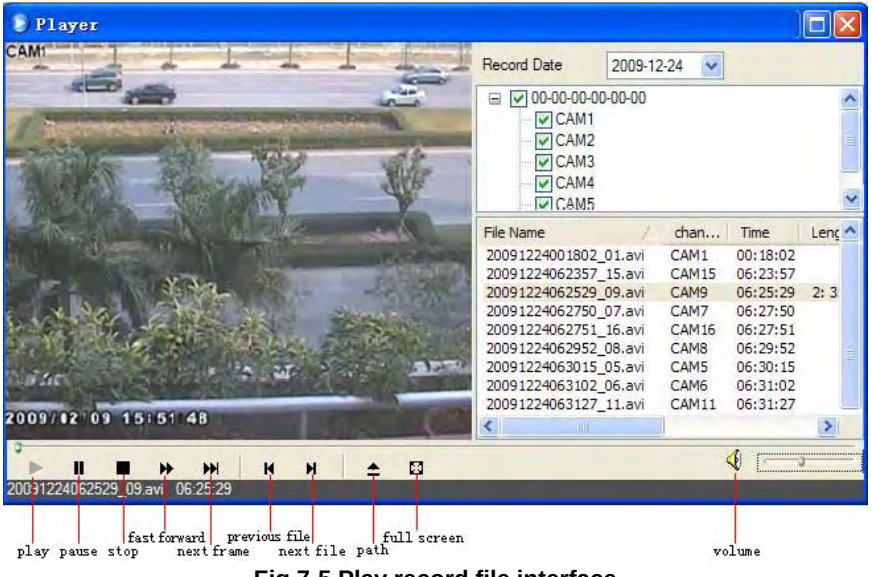


Fig 7-5 Play record file interface

This DVR supports remote time search, event search and file management.

By Time Search:

Step1: Enter into Search→time search; refer to Fig 7-6:

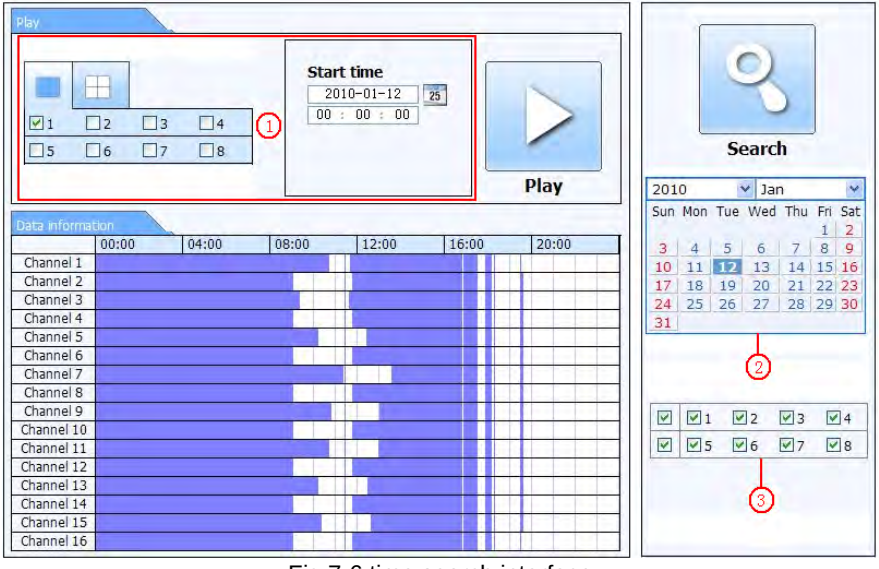


Fig 7-6 time search interface

Step2: click “Search” button. The record data will be displayed in the data information list box; the highlight date in the area means have record data, click those data; select the record channels in area

Step3: User can set the data playing time and display mode in the area as required

Step4: Select certain item from the data information list box, click “play” button to playback

Step5: Click the relevant buttons in the interface; user can do some operations such as: FF, pause, change channel mode,

research, etc. refer to Fig 7-7:

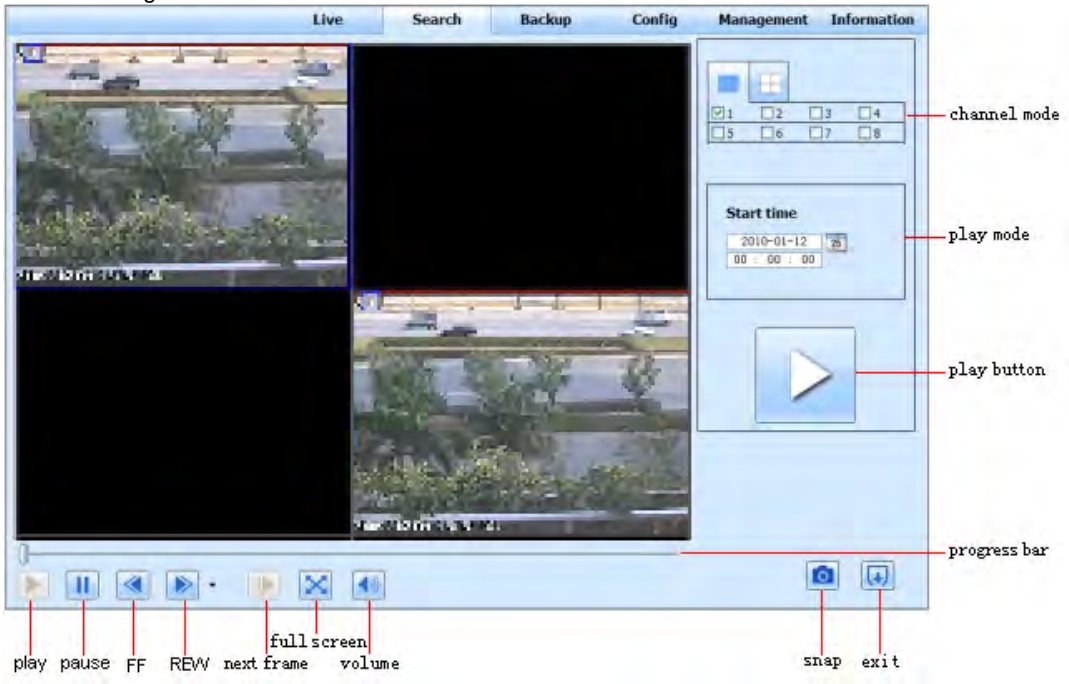


Fig 7-7 Time search playback

By Event Search:

Step1: Enter into Search→event search; refer to Fig 7-8:

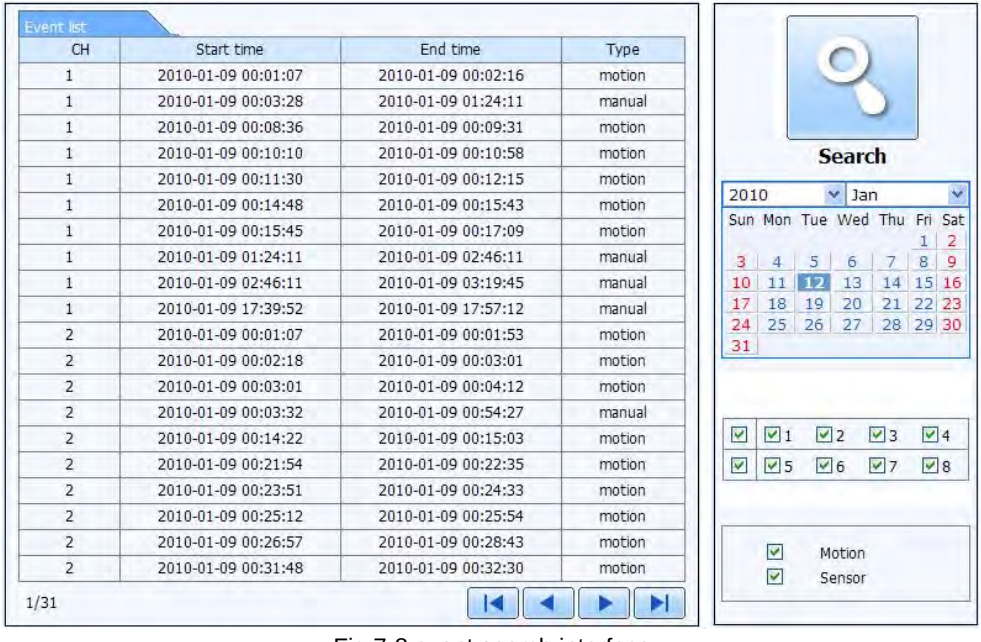


Fig 7-8 event search interface

Step2: click the highlight date and select record channels and then tick off the event type: motion and sensor, click “search” button

Step3: the events will be display in the event list box. Double-click certain item to playback

File Management

Step1: Enter into Search→file management; refer to Fig 7-9:

Fig 7-9 file management interface

Lock: select certain file item in the file list box, click “Lock” button to lock this file that ca not be deleted or overlaid

Unlock: select a locked file, click “unlock” button to unlock this file

Delete: select an unlock file, click “delete” button to delete this file from file list

7.4.2 Remote backup

Click Backup button to enter into backup interface, refers to Fig 7-10:

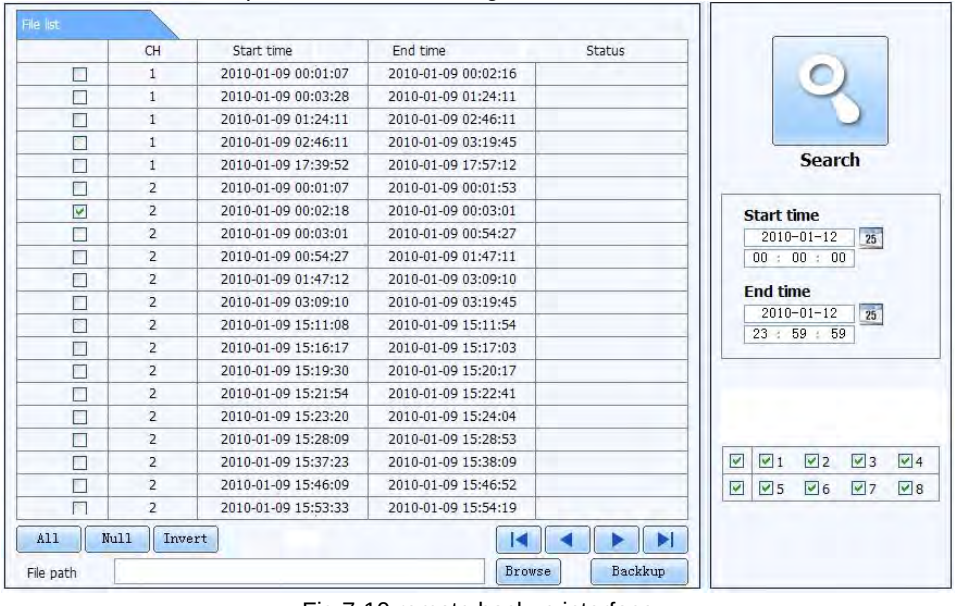


Fig 7-10 remote backup interface

Step1: select channels, set the start and end time and then click “search’ button to display the file information in the file list box.

Step2: select backup files, click “browse” button to set the save path, and then click “backup” button to start backup. The backup files will be saved on user’s PC.

7.5 Remote System Configuration

User can remote setup the parameters of the device. Functions of remote configurations include: basic configuration, live configuration, record configuration, schedule configuration, alarm configuration, network configuration, PTZ configuration and user configuration. User should firstly select an item in the menu list on the left, and then setup the relative parameters. When one user setup parameters of a certain item, others cannot setup this one. Click Config to enter into the below interface refer to Fig 7-11:

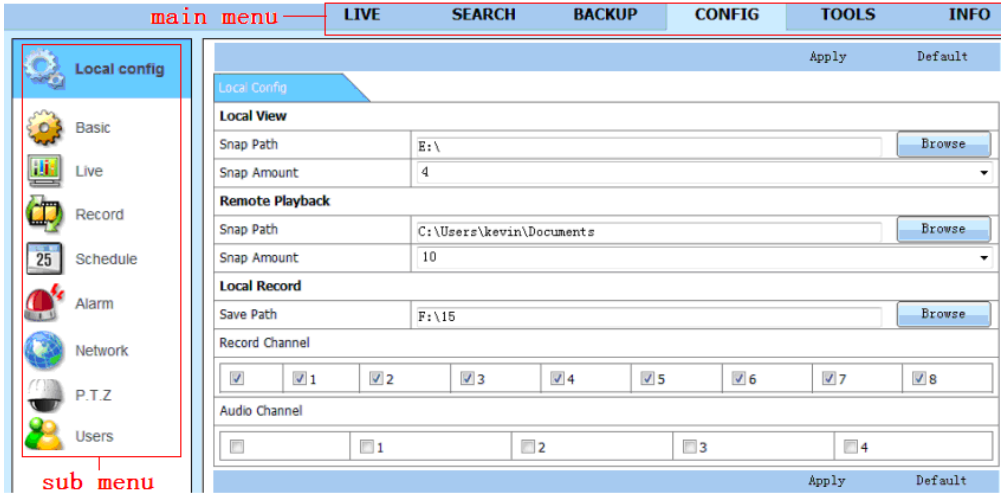


Fig 7-11 remote menu setup

The sub menu lists and the options in every item are similar with those on the DVR. Please refer to Chapter 3 Main Menu Setup Guide for more details. Click “Apply” button to save above settings; click “default” button will recover the original

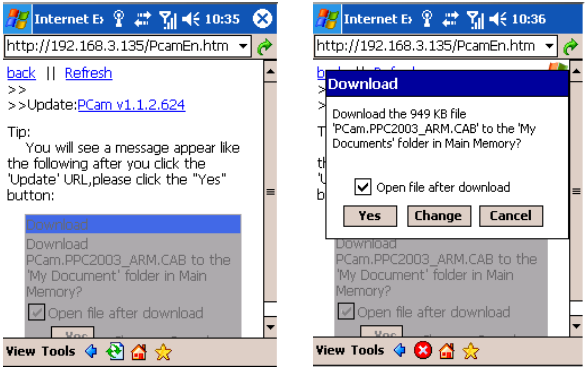
settings.

8 Mobile Surveillance

This DVR supports mobile surveillance by Iphone, Gphone or smart phones with Windows mobile and symbian OS. At the same time, it supports 3G network. We tested Dopod D600 (WM5) and Dopod S1 (WM6), which work fine with the DVR.
It wants to make mobile surveillance, need first enable network service on the DVR, and refer to Chapter 4.6 Network configuration. The below is the use instructions on mobile client end for two OS.

8.1 By Phones with Windows mobile

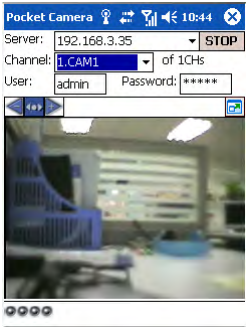
Step1： Firstly activate the network access on mobile phone and then run “Internet Explorer”. Input the server’s address and the connection is built up shown as below:
Step2：Click on the software name. A dialog box pops up:

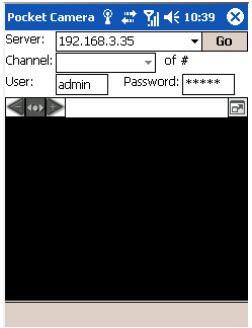


Step3：Click “Yes” to start downloading and installing:

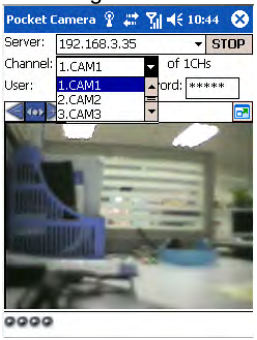
Step4：PCam will be opened automatically after installed

Step5：Input the server’s address, ID and password respectively in the columns of “Server”, “User” and “Password”, and click “Go” to log on the server. It will show the picture if access successfully.





Step6：Camera 1 is the default channel after login. Change the channel in rolling-down menu of “Channel”:



***Notice**: User name and password here are the same with that used on the DVR. The default is admin and 123456.*

8.2 By Phones with Symbian

Please use the smart phones with symbian version supported by this unit.

Symbian S40	support
Symbian UIQ	support
Symbian S80	support
Symbian S60	support
Symbian S60 3rd Edition-Symbian OS v9.1	support
Symbian S60 3rd Edition with FP 1-Symbian OS v9.2	support
Symbian S60 3rd Edition with FP2-Symbian OS v9.3	support
Symbian S60 5th Edition-Symbian OS v9.4	support
Symbian S60 5.1 Edition-Symbian OS v9.5	support

Step1：Firstly enable the network access on mobile phone. Then run Web browser.
Step2：Input the DVR server's IP address in a new-built bookmark. Click this bookmark to connect to the DVR.
Step3：A welcome window will pop up and requires a package. Click the software name to download

Step4：A security windows will pop up after downloading and ask if install the package. Click YES to install.
Step5：A Scam shortcut icon appears on the system menu after finished.
Step6：Run Scam program. It will enter a function interface.
Live view: to do mobile live view
Image view: to check the pictures snapped in live view
System setting: Login setting and Alarm setting.
Help: function indication and help
Step7：Click System setting--->Login Setting to enter login interface.

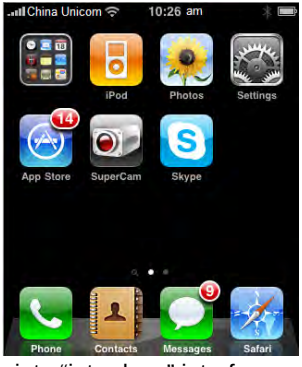
Step8：Input the server's address, ID and password respectively. Then save.
***Notice**: About Access point, there may be different access points in different countries or from service providers.*
Step9：Enter Live View, it will connect the server and display pictures.
***Notice**: User name and password here are the same with that used on the DVR. The default is admin and 123456.*
Step10：In Live View, users can do snapshot, change channels and control PTZ.

8.3 The operation method for iPhone mobile clients

1. Install through iphone.

Step 1. Open App Store function of iphone

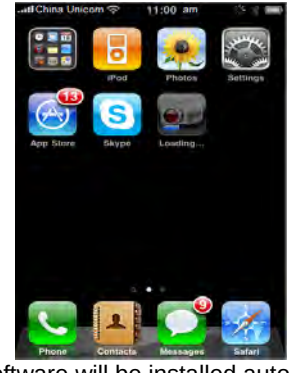
Step 2. Enable “search” function to search “SuperCam”



Step 3: Click SuperCam, enter into “introduce” interface and then click “FREE”, it will change into “INSTALL”

China Unicom
11:01 am
Search
Info
SuperCam_Pro
TVT Digital Technology Co.,...
189 Ratings
FREE
SuperCam is a professional mobile phone client software for digital video recorders and IP cameras in CCTV surveillance (compatible models only).
1.Support single,Multi-channel monitor switching.
2.Support PTZ control
3.Support channel video capture,record and record playback
4.Support channel audio
5.Support server list. No limit on the number of server list.
6.Support audio , shake alarm.
7.Support remoto server information query.
8.Support electronic zoom (fullscreen mode)
9.Support backup record files to Ablum on iPhone,then you can transport these files to PC by ITunes.
Featured
Categories
Top 25
Search
Updates

China Unicom
11:01 am
Search
Info
SuperCam_Pro
TVT Digital Technology...
189 Ratings
INSTALL
SuperCam is a professional mobile phone client software for digital video recorders and IP cameras in CCTV surveillance (compatible models only).
1.Support single,Multi-channel monitor switching.
2.Support PTZ control
3.Support channel video capture,record and record playback
4.Support channel audio
5.Support server list. No limit on the number of server list.
6.Support audio , shake alarm.
7.Support remoto server information query.
8.Support electronic zoom (fullscreen mode)
9.Support backup record files to Ablum on iPhone,then you can transport these files to PC by ITunes.
Featured
Categories
Top 25
Search
Updates



Step 4: Input iTunes Store password and then click “OK”, the software will be installed automatically.
Note: if it was the first time for user to operate, please enter user ID; if there is no Store account, user needs to apply one.

2. Install through PC

Step 1: Install iTunes store in PC and then login Step 2: Connect iPhone and PC

Step 3: Enable “search” function to search “SuperCam”

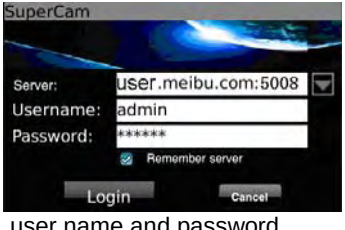
Step 4: Click “free application” button

Step 5: Input apple ID and password, then click “acquire”

Step 6: Tick off “synchronously apply program” and “SuperCam”, and then click “apply” button

Operation Instruction for iphone

1. Login interface

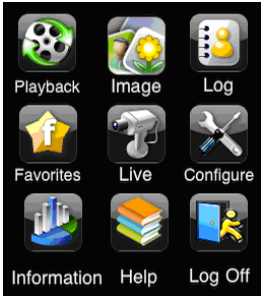


Enter server’s IP address (or domain name), user name and password

Click “Remember server” to save the setting; click ▼ button can quick input saved server address, user name and

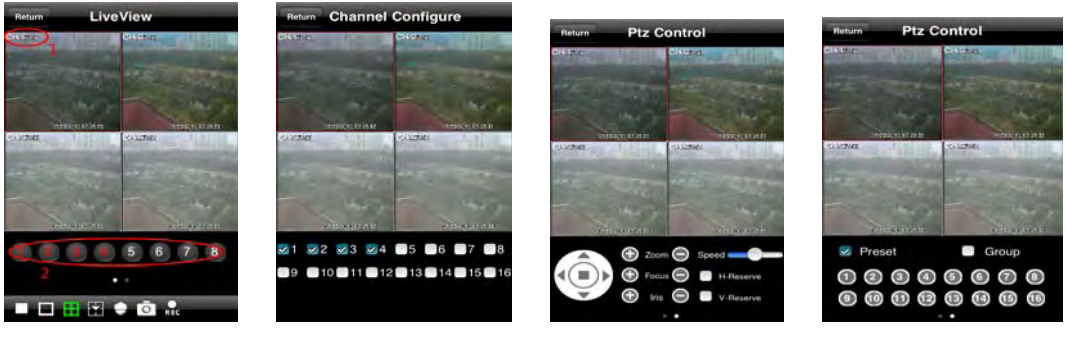
password.

2. Main Interface



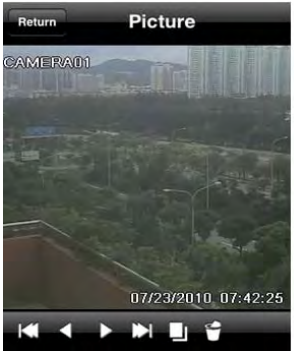
【Playback】	playback record file	**【Image】**	image view
【Log】	log record	**【Server List】**	device list
【Live】	live view	**【Settings】**	software setting
【Information】	device information view	**【Help】**	software help center
【Logoff】	logoff and return to login interface		

3. Live View Interface



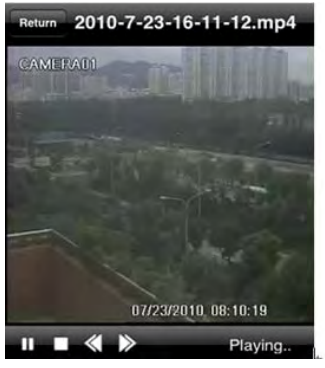
Mark 1	Current viewing channel	Mark 2	Channel status
	Switch channels		PTZ, click to switch to Fig 2 interface
	Snap picture		Record
	Close the video of the current channel		Live audio
	Switch to the single image		Switch to four images
	Upward rotates the PTZ		Downward rotates the PTZ
	Leftward rotates the PTZ		Rightward rotates the PTZ
	Stop rotating the PTZ		Zoom In/Focus In/Iris Add
	Zoom Out/Focus Out/Iris Sub	Preset	elect the preset point
Group	Set the cruise line	Speed	Rotate speed of the PTZ
H-Reverse	Horizontal- Reverse	V-Reverse	Vertical- Reverse

4. Image view interface



The first picture
Previous
Next
The last picture
copy picture to album
Delete picture

5. Record Playback interface



Play/pause
stop
Rewind
Fast forward

Click the record file to playback.

6. Server list Interface

Add a server list
Modify a server list
Delete a server list

7. Config interface

Main parameters for mobile phone video configuration

Record file clip size: Single video size. When the video size is greater than setup value, change another video files

Reserved disk space: Reserved SD Card disk space, when the disk space is less than setup value, the video will be stopped

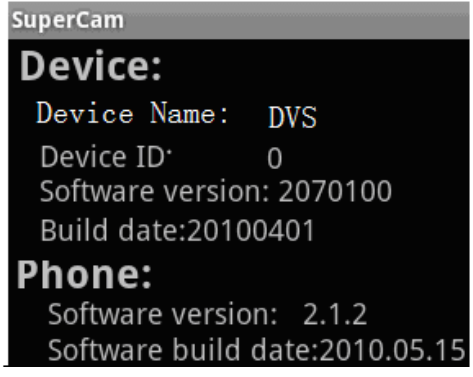
Display configuration：

Display mode: User can select one live picture display or four live picture displays

Remember display order: User can choose whether to remember display order or not.

Alarm configuration：Select Audio Alarm. When Video Loss/Sensor/Motion happens, trigger sound alarm. Select shake Alarm. When Video Loss/Sensor/Motion happens, trigger vibrate alarm.

8. Information View Interface



Device name: the current device name

Device ID: the current connection device ID

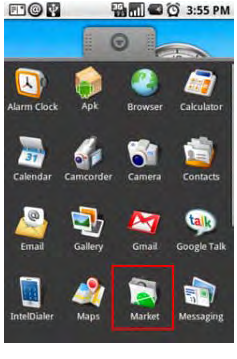
Software version: the current connection device software version

Build date: the current connection device build date

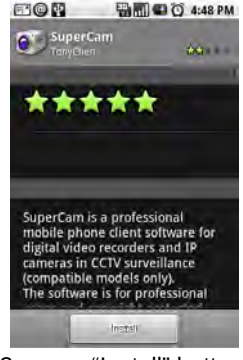
Software version: the software version of mobile phone in use

Software build date: the software build date of mobile phone in use

8.4 The installation & operation methods for Android mobile clients Software Installation

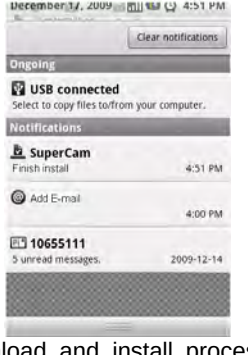


Step 1: run Google Market program


4:48 PM
SuperCam
TonyChen
SuperCam is a professional mobile phone client software for digital video recorders and IP cameras in CCTV surveillance (compatible models only).
The software is for professional
Install

Step 2: search"SuperCam"

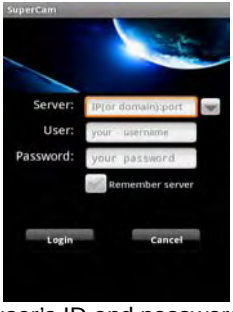
Step 3: press "Install" button



Step 4: click "OK" button

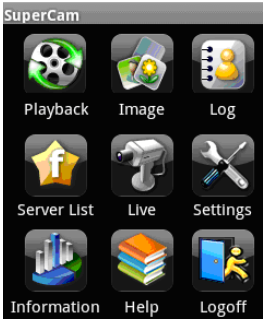
Step 5: user can view the download and install process in notifications; finished download, the software will install automatically.

Login



Enter into server's IP address (or domain name), user's ID and password.
Click "Remember server" to save the setting; click ▼ button can quick input saved server address, user name and password.

Main menu



【Playback】	playback record file	**【Image】**	image view
【Log】	log record	**【Server List】**	device list
【Live】	live view	**【Settings】**	software setting
【Information】	device information view	**【Help】**	software help center
【Logoff】	logoff and return to login interface		

Live view

(Fig 1)

(Fig 2)

Mark 1	Current viewing channel	Mark 2	Channel status
	Switch channels		PTZ, click to switch to Fig 2 interface
	Snap		record
	talk		Live audio
	Full screen		Return
	Upward rotates the PTZ		Downward rotates the PTZ
	Leftward rotates the PTZ		Rightward rotates the PTZ

	Stop rotates the PTZ		Zoom In/Focus In/Iris Add
	Zoom Out/Focus Out/Iris Sub	Preset	Select the preset point
Group	Set the cruise line		

Image view

	Previous		Next
	Zoom out		Delete
	Zoom out		Return to main menu

Record playback

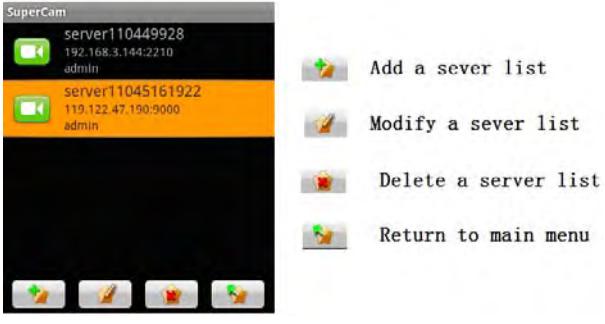
(Fig 3)

(Fig 4)

	Play/pause
	Full screen
	stop
	Return to record file interface (Fig 3)

Click the record file (Fig 3) to playback (Fig 4)

Server list



Config interface

Alarm setting	Tick off Sound Alarm, when Video Loss/Sensor/Motion happen, trigger sound alarm; Tick off Vibrate Alarm, when Video Loss/Sensor/Motion happen, trigger vibrate alarm
Storage setting	User can setup the relevant parameters of mobile video. This function can be valid only insert SD card.
Path	Save path for mobile video files, the default catalog is /SD Card/. Click button to change path.
Reserved disk space	reserved SD Card disk space, when the disk space is less than setup value, the video will be stopped
Video clip size	Single video size. When the video size is greater than setup value, change another video files
Remove all recorder files before	delete all current video files

Information view

Device ID: the current connection device ID

Software version: the current connection device software version

Build date: the current connection device build date

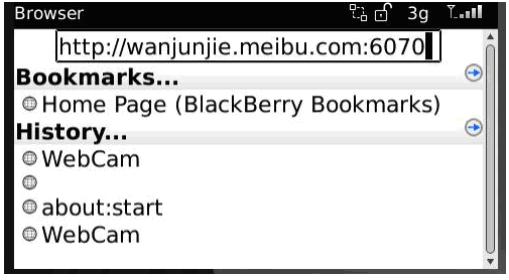
Software version: the software version of mobile phone in use

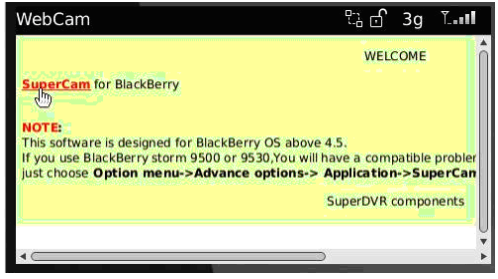
Software build date: the software build date of mobile phone in use

8.5 Installation and Operation methods for blackberry mobile phone Client

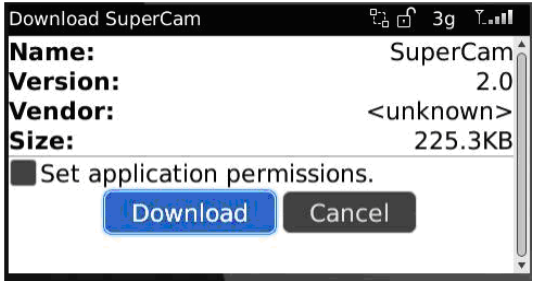
8.5.1 Installation instruction for Blackberry mobile phone client

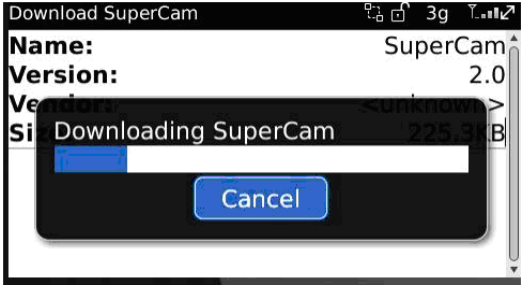
1. Open the browser of BlackBerry phone and enter sever address
2. Click “SuperCam” to link



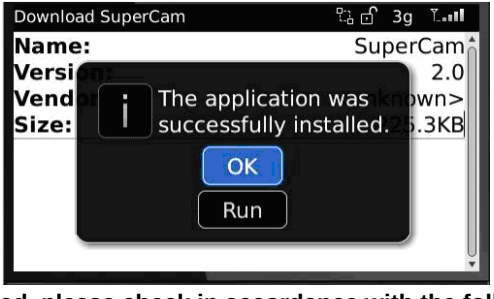

WebCam
3g
WELCOME
SuperCam for BlackBerry
NOTE:
This software is designed for BlackBerry OS above 4.5.
If you use BlackBerry storm 9500 or 9530,You will have a compatible probler
just choose Option menu->Advance options-> Application->SuperCan
SuperDVR components

3. Click “Download” button on the popup interface and the download progress will be shown.





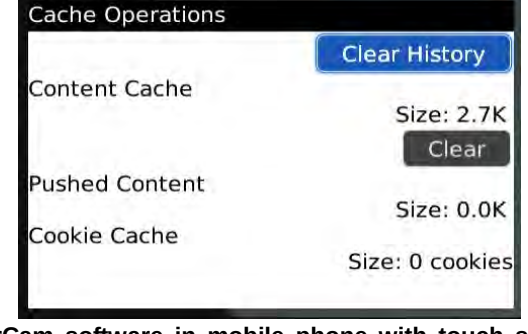
4. Finished downloading, the software will be installed automatically.



Note: If the software fails to download, please check in accordance with the following steps:

1. Check whether the network of mobile phone is normal or not
2. Check whether DVR server connect network normally or not
3. Modify the option of Browser Configuration.
   1) Enter into Menu->Option->Browser Configuration; configure referring to the following figure.

2) Enter into Menu->Option->Cache Operations, clear up browser cache.

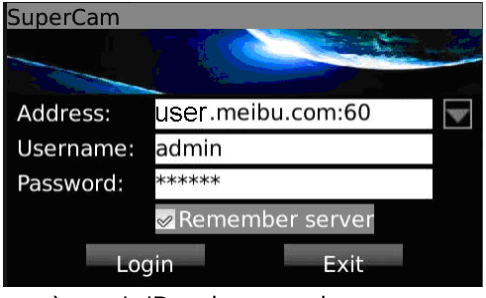


Note：When user used the SuperCam software in mobile phone with touch screen, there will be compatible problem.

Solution: Enter into Options Menu->Advance options->Applications->SuperCam and click “Disable Compatibility” button. This problem will be solved.

8.5.2 Operation method for Black berry mobile phone client

1. Login

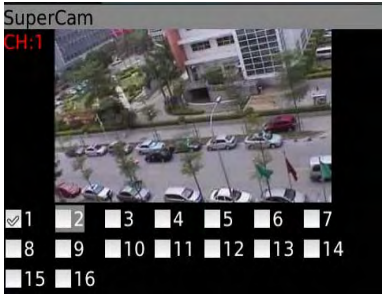


Enter server's IP address (or domain name), user's ID and password.
Click "Remember server" to save the setting; click ▼ button can quick input saved server address, user name and password.

2. Main interface

【Playback】	playback record file	【Image】	image view	【Live】	live view
【Log】	log record	【Server List】	device list	【Settings】	software setting
【Information】	device information view	【Help】	software help center	【Logoff】	logoff and return to login interface

3. Live view



Note: User can click Return button on the Blackberry phone to return the previous interface.

Mark 1	Current viewing channel	Mark 2	Channel status
	Switch channels		PTZ, click to switch to Fig 2 interface
	Snap		Full screen
	Background alarm		Stop rotating the PTZ
	Upward rotates the PTZ		Downward rotates the PTZ
	Leftward rotates the PTZ		Rightward rotates the PTZ
	Zoom In/Focus In/Iris Add		Zoom Out/Focus Out/Iris Sub
Preset	Select the preset point	Group	Set the cruise line

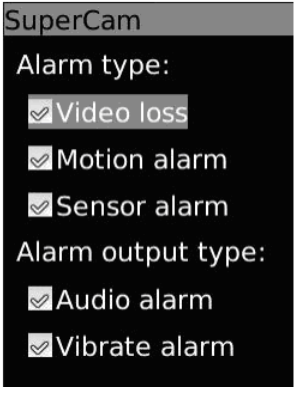
4. Server list

[Add] Add a server list

[Modify] Modify a server list

[Delete] Delete a server list

5. Software configuration



Alarm type: Setup the type of background alarm

(Video Loss/Sensor/Motion)

Alarm output type: Setup prompt type of backgound

Alarm (sound alarm/ bibrate alarm)

6. Information view

Device ID: the current connection device ID

Software version: the current connection device software version

Build date: the current connection device build date

Software version: the software version of mobile phone in use

Software build date: the software build date of mobile phone in use

Appendix A FAQ

Q1. Why the DVR cannot start after connected to the power?

a. The adapter has been damaged. Please change an adapter

b. The power of the adapter is not enough. Please remove the HDD to check

c. Hardware problem

Q2. There is not menu output or only has live image display

a. Check up whether other devices can display menu or long press ESC key to wait for login dialog box to appear.

Q3. The indicator of the DVR lights, but no output. Why?

a. The power of the adapter is not enough. Please remove the HDD or change an adapter to try.

b. The video format of the DVR is different from that of the monitor.

c. Connection problem. Please check the cable and the ports of monitor and DVR.

Q4. Why are no images displayed on parts or all of the channels of the DVR?

a. Connection problem. Please check the cable and the ports of camera and DVR.

b. Camera problem. Please check the cameras.

c. The video format of the DVR is different from that of the cameras. Please change DVR system format.

Q5. Cannot find HDD

a. The power of the adapter is not enough. Please change an adapter to try.

b. Connection problem. Please check the power and data cables.

c. The HDD is damaged. Change a new one.

Q6. Cannot record

a. Don't format HDD. Please format it manually first.

b. Don't enable record function or incorrect setup. Please refer to Chapter 5 Record search & playback and backup.

c. HDD is full and not enables recycle function. Please refer to 4.3 Record configuration. Chang a new HDD or enable recycle.

d. The HDD is damaged. Change a new one.

Q7. Cannot use mouse.

a. wait 1-2 minutes after mouse connected.

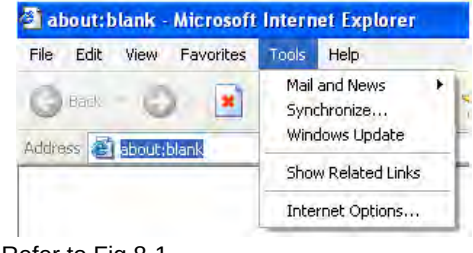
b. Not detected. Plug/unplug several times.

c. The mouse is incompatible. Please change a mouse.

Q8. Cannot download ActiveX control.

a. IE browser blocks ActiveX. Please do setup following below.

Open IE browser. Click Tools-----Internet Options….



select Security------Custom Level….Refer to Fig 8-1

Enable all the sub options under “ActiveX controls and plug-ins” refer to Fig 8-2

Then click ok to finish setup.

b. Other plug-ins or anti-virus block ActiveX. Please uninstall or close them.

Fig 8-1

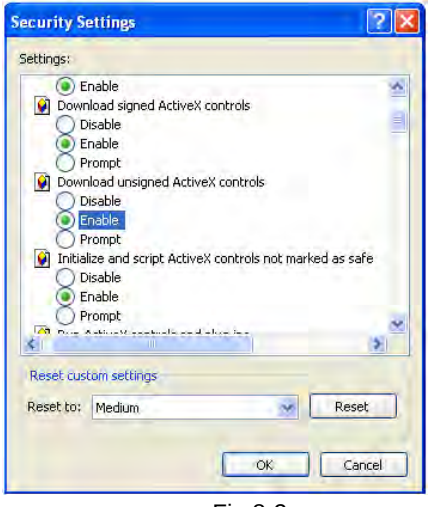


Fig 8-2

Q9: How to deal with when DVR starts, it displays "please wait…"all the time

First possible reason: hard-disk cable and data cable are not well connected.

Solution: Please check the connection of hard-disk cable and data cable and make sure they are well connected; If still not working, please unplug them and then try re-plugging again;

Second possible reason: It is forced to stop because hard disk has disabled track which causes the system checking hard disk cannot skip

Solution: Change another new hard disk or reformat the broken one

Q10: How to input password and digital numbers

The method to input password and digital numbers is to click the box behind *password* or *items* needing to input by numbers, and then the small keyboard will appear. Please select number or letter to input (the initial password is 123456), or you can use the digital keys in the front panel, or the digital keys on the remote controller.

Q11: Why is the hard disk used in a DVR identified a new hard disk if directly used to another same type DVR? And why must we format it again?

When DVR only uses one hard disk, the hard disk removed from one to another same type DVR can work normally without format. However, when a DVR adds to a new hard disk, it will identify the hard disk as a new one and inquire whether to format no matter whether this hard disk used or not in another same type DVR before. In this condition, it can be used normally after formatted according to the guide; if two or more hard disks used in different DVRs, when used in another DVR with the same type, they will be identified to be two or more new hard disks, and all of them need to format. In general, please do not try using more disks removed from different DVRs into another one in case the data lose.

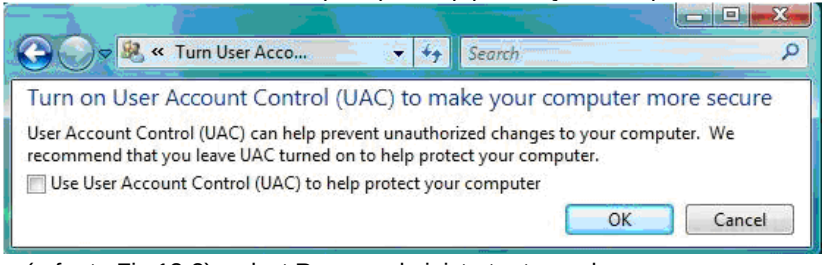
Q12: What are the minimum configurations of PC for clients connecting?

PC Module	Parameters
CPU	Intel Celeron 2.4G
Motherboard	Intel 845
HDD	80G
RAM	512M
VGA	NVIDIA GeForce MX440/FX5200; ATIRADEON 7500/X300
OS	Windows 2000(SP4 above) /Windows XP(SP2 above) /VISTA
DirectX	9.0

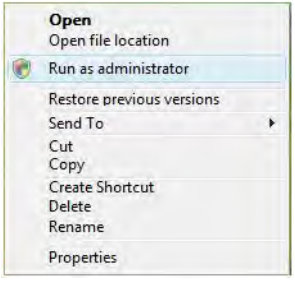
Q13: How to handle the situation when codec Control is blocked to install in the VISTA or Win7 system?

If user gets this problem, may have two ways to fix it:

a. Enter Control Panel→User Account and Family Safety → User Account Control(refer to below picture); click Turn User Account on or off. Cancel Use User Account Control (UAC) to help protect your computer.


« Turn User Acco...
Search
Turn on User Account Control (UAC) to make your computer more secure
User Account Control (UAC) can help prevent unauthorized changes to your computer. We recommend that you leave UAC turned on to help protect your computer.
Use User Account Control (UAC) to help protect your computer
OK
Cancel

b. Right click IE browser (refer to Fig 13-2), select Run as administrator to run browser.



Appendix B Calculate Recording Capacity

Users can calculate the size of hard disk according to the saving time and DVR recording settings. The DVR uses fixed video bit rate. The below are the details at different settings.

Video Format	Resolution	Frame Rate Totally(FPS)	Video Quality	Bit Rate (kbps)	Used Space(MB/h)
NTSC	CIF	30	Highest	1M	465
			Higher	768k	297
			Medium	512k	230
			Low	384k	173
			Lower	256k	115
			Lowest	128k	56
PAL	CIF	25	Highest	1M	466
			Higher	768k	295
			Medium	512k	235
			Low	384k	175
			Lower	256k	112
			Lowest	128k	56.4

The calculation format is: **Total Recording capacity =Used space per hour (MB/h) (coverage rate of hard disk) × recording time (hour) ×channel numbers**

For instance, one customer uses PAL cameras, set resolution to CIF, video quality to Lowest, frame rate to 25 fps for enabling total 16 channels. He wants the unit to record continuously in a month. Below is the calculation:

Total Recoding capacity =56.4 (mb/h) X 24(hours/day) X30(days) X16(channels)= 649728(MB)≈650(GB)

Therefore, customers just install one SATA HDD with 750GB, it can almost record for one month.

Appendix C Compatible Devices

1. Compatible USB drive after test.

Brand	Capacity
SSK	512MB, 1G, 2GB
Netac	4GB
Kingston	2GB
Aigo	2GB
Smatter vider	1GB
SanDisk	4GB

Tab C.1 Compatible USB drive

2. Compatible HDD list

Brand	Capacity
Seagate Barracuda LP ST3200542AS	2TB
Seagate Barracuda 7200.11 ST31500341AS	1.5T
Seagate SV35.3 ST31000340SV	1T
Seagate Pipeline HD.2	500G
Seagate Barracuda 7200.10	320G
Seagate Barracuda 7200.10 ST3250310AS	250G
Seagate Barracuda 7200.11 ST3160813AS	160G
Seagate Barracuda 7200.10 ST380815AS	80G
Maxtor Diamondmax 21 STM3160215AS	160G
HITACHI Deskstar HDS721616PLA380	160G
HITACHI Deskstar	80G
WD WD1600JS	160G
Samsung HD161HJ	160G

Appendix D 4-CH Specifications

Compression format	Standard H.264 Baseline
Video output	Composite：1.0V p-p/75Ω BNC×2 , VGAX1
Video input	Composite：1.0V p-p/75Ω BNC×4
VGA Resolution	1280*1024 /1024*768/ 800*600
Record Resolution	352*288/704*576 (PAL), 352*240/704*480(NTSC)
Display Frame Rate	100FPS (PAL), 120FPS (NTSC)
Record Frame Rate	100/25 FPS (PAL), 120/30 FPS (NTSC)
Audio input	-8dB~ 22k, RCA X4
Audio output	-8Db~92dB, RCA X1
Alarm input	NO or NC 4CH
Alarm output:	1CH
Record Mode	Manual / Sensor /Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485, USB2.0 x 2(one for backup, another for USB mouse)
Disk info	SATA x 1
Remote controller	YES
Power supply	12V3A
Temperature	0 -50
Humidity	10%-90%
Average Operating Power （Excluding HDD）	≤30W

Appendix E 8-CH Specifications

Compression format	Standard H.264 Baseline
Video output	Composite：1.0V p-p/75Ω BNC×2 , VGAX1
Video input	Composite：1.0V p-p/75Ω BNC×8
VGA Resolution	1280*1024 /1024*768/ 800*600
Record Resolution	352*288/704*576 (PAL), 352*240/704*480(NTSC)
Display Frame Rate	200 FPS (PAL), 240 FPS (NTSC)
Record Frame Rate	200/50 FPS (PAL), 240/120 FPS (NTSC)
Audio input	-8dB~ 22k, RCA X4
Audio output	-8Db~92dB, RCA X1
Alarm input	NO or NC 8CH
Alarm output:	1CH
Record Mode	Manual / Sensor /Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485, USB2.0 x 2(one for backup, another for USB mouse)
Disk info	SATA x 1
Remote controller	YES
Power supply	12V3A
Temperature	0 -50
Humidity	10%-90%
Average Operating Power （Excluding HDD）	≤30W

Appendix F 16-CH Specifications

Compression format	Standard H.264 Baseline
Video output	Composite：1.0V p-p/75Ω BNC×2, VGAX1
Video input	Composite：1.0V p-p/75Ω BNC×16
VGA Resolution	1280*1024 /1024*768/ 800*600
Record Resolution	352*288/704*576 (PAL), 352*240/704*480(NTSC)
Display Frame Rate	400FPS (PAL), 480FPS (NTSC)
Record Frame Rate	400/100 FPS (PAL), 480/120 FPS (NTSC)
Audio input	-8dB~ 22k, RCA X16
Audio output	-8Db~92dB, RCA X1
Alarm input	NO or NC 16CH
Alarm output:	1CH
Record Mode	Manual / Sensor /Timer / Motion detection
Simplex/Duplex/Triplex	Pentaplex
Network Interface	RJ45 (LAN, INTERNET)
PTZ control	YES
Communication interface	RS485, USB2.0 x 2(one for backup, another for USB mouse)
Disk info	SATA x 1
Remote controller	YES
Power supply	12V3A
Temperature	0 -50
Humidity	10%-90%
Average Operating Power （Excluding HDD）	≤30W